

Notice of Public Availability of Modified Text and Availability of Additional Documents

Advanced Clean Fleets Regulation

Public Hearing Date: October 27, 2022

Public Availability Date: March 23, 2023

Deadline for Public Comment: April 7, 2023

At its October 27, 2022, public hearing, the California Air Resources Board (CARB or Board) considered staff's proposal to add sections: 2013, 2013.1, 2013.2, 2013.3, 2013.4, 2014, 2014.1, 2014.2, 2014.3, 2015, 2015.1, 2015.2, 2015.3, 2015.4, 2015.5, 2015.6, and 2016, of Title 13, California Code of Regulations, which would accelerate the widespread adoption of zero-emission vehicles (ZEV) in the medium- and heavy-duty sector and for light-duty package delivery vehicles. The proposed regulation would require certain fleets to deploy ZEVs starting in 2024 and would establish a clear end date for new medium- and heavy-duty internal combustion engine (ICE) vehicle sales.

The Board directed the Executive Officer to determine if additional conforming modifications to the regulation were appropriate and to make any proposed modified regulatory language available for public comment, with any additional supporting documents and information, for a period of at least 15 days in accordance with Government Code section 11346.8. The Board further directed the Executive Officer to consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer was directed to evaluate all comments received during the public comment periods, including comments raising significant environmental issues, and prepare written responses to such comments as required by CARB's certified regulations at California Code of Regulations, title 17, sections 60000-60007 and Government Code section 11346.9, subdivision (a). The Executive Officer was further directed to present to the Board, at a subsequently scheduled public hearing, staff's written responses to environmental comments and the final environmental analysis for consideration for approval, along with the finalized regulation for consideration for adoption.

The resolution and all other regulatory documents for this rulemaking are available online at the following CARB website: <https://ww2.arb.ca.gov/rulemaking/2022/acf2022>

The text of the modified regulatory language is shown in Appendices A-1 through A-4. The originally proposed regulatory language is shown in plain text because each of the sections

are entirely new text. New deletions and additions to the proposed language that are made public with this notice are shown in strikethrough and single underline format, respectively.

In the Final Statement of Reasons, staff will respond to all comments received on the record during the comment periods. The Administrative Procedure Act requires that staff respond to comments received regarding all noticed changes. Therefore, staff will only address comments received during this 15-day comment period that are responsive to this notice, documents added to the record, or the changes detailed in Appendices A-1 through A-4 and Appendix B.

Summary of Proposed Modifications

The following summary does not include all modifications to correct typographical or grammatical errors, changes in numbering or formatting, nor does it include all of the non-substantive revisions made to improve clarity.

Global changes: in reference to vehicles, the term “type” was changed to “configuration” throughout.

A. State and Local Government Fleets

The following numbered list provides the purpose and rationale for staff’s proposed changes to the draft regulation order provided as Appendix A-1.

(A) Section 2013

1. In section 2013(a)(1), language was added to clarify that the section referenced in the text is referring to exemptions and some text was moved to the following new section called “vehicle scope” to more clearly identify who is affected and which vehicles are affected to improve clarity and readability. Language was also added to specify that section 2013(e) is an exception from the applicability requirements for those fleets that opt-in to the ZEV Milestones Option. This was necessary to improve the readability and clarity of the regulation and to ensure only one reasonable and logical interpretation of this criteria.
2. In section 2013(a)(2), a new section called “vehicle scope” was added to specify that except as provided in the exemptions specified in section 2013(c), vehicles subject to this regulation are vehicles that have a gross vehicle weight rating (GVWR) greater than 8,500 lbs. that are operated in California. This addition was necessary to set forth the types of vehicles that are intended to be included in the scope of the regulation to make it more clear. This was moved from a prior subsection for fleet applicability. This change is necessary to ensure fleet owners know which vehicles are affected and to improve readability.
3. In renumbered section 2013(a)(3), language was modified to limit applicability of the hiring requirements to only those hiring fleets subject to this regulation. This was

unintentionally duplicative of similar hiring requirement language in the High Priority and Federal Fleets regulation.

4. In section 2013(b), the definition of “authorized dealer” was modified to specify that the term means independent entities that are both authorized by a manufacturer and in fact capable of performing repairs needed to maintain vehicles. This modification was necessary because the previous language did not reference who would authorize the dealer and was not specific about the type of repairs of which the dealer is capable. This change is necessary to clarify to which year the language was referring and to prevent more than one reasonable and logical interpretation of the criteria.
5. In section 2013(b), the definition of “battery-electric vehicle” or “BEV” was added that specifies it means the same as defined in the Code of Federal Regulations. The addition of the definition is necessary because other modifications to the Daily Usage Exemption differentiate between battery-electric and fuel-cell electric vehicles, so a definition was needed to make the delineation. This definition was selected to be consistent with the definition in CARB’s Zero-Emissions Powertrain Certification regulation, on which this regulation relies for considering whether a ZEV is available to purchase.
6. In section 2013(b), the definition of “California fleet” was modified to remove the statement that “if a vehicle is operated in California at any time during a calendar year, it will be considered part of the California fleet for the entire calendar year”. This change was necessary as the limitation is only relevant for fleets using the ZEV Milestones Option of section 2015.2 in the High Priority and Federal Fleets regulation and is not applicable to the State and Local Government Fleets that do not opt into the ZEV Milestones Option. Their compliance obligations are determined on a percentage of vehicle purchases, rather than a calculation based on the size of the California fleet.

Language was also modified to move the “in California” modifier to apply to “vehicles operated” rather than “fleet owners”, because the intent of the definition is to apply to vehicles that are operated in California, as opposed to where the fleet owner may be.

7. In section 2013(b), the definitions of “Class 4”, “Class 5”, “Class 6”, “Class 7”, and “Class 8” were moved under a new definition for “Weight Class” as subsections. This change was necessary to group these definitions under the common definition for weight class to specify what GVWR determines which weight class.
8. In section 2013(b), the definition of “configuration” was modified to simplify the definition to mean the primary intended function for which a complete vehicle is designed, or as determined by the body permanently attached to the chassis of an incomplete vehicle. Reference to equipment integrated on the body was removed to prevent unintentionally including auxiliary or equipment for secondary uses in the definition. Examples were included to specify terms commonly understood by those directly affected by the regulation that would exemplify the defined term, and

examples of commonly understood equipment terms that would not be included in the definition were provided.

9. In section 2013(b), the definition of “declared emergency event” was modified to include any degree or condition of emergency specified in the California Government Code section 8558. This change was necessary because the code section referenced includes both conditions and degrees of emergency, and leaving out the degrees of emergency would unintentionally narrow the requirements.
10. In section 2013(b), the definition of “fleet owner”, language was removed from subsection (A) referencing “other equally reliable evidence” because the term was undefined, and the rental or lease agreement should identify the party responsible for compliance. This simplifies implementation and enforcement of the regulation and reduces burden on regulated parties by requiring a single source of this identification.

Language was also moved from subsection (B) to the enforcement section of 2013.4 to group similar enforcement criteria together and improve readability of the regulation.

Additionally, “powertrain retrofits” was modified to “converting a vehicle to a ZEV”. This change is necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.

11. In section 2013(b), a new definition was added for “hydrogen fuel-cell electric vehicle” or “FCEV” to mean a vehicle with an electric motor where energy for the motor is supplied by an electrochemical cell that produces electricity via the non-combustion reaction of hydrogen. The addition of the definition is necessary to conform with other modifications to the Daily Usage Exemption that differentiate between battery-electric and fuel-cell electric vehicles. This definition was selected to be consistent with the definition in CARB’s Zero-Emissions Powertrain Certification regulation, on which this regulation relies for considering whether a ZEV is available to purchase.
12. In section 2013(b), a new definition was added for “intermittent snow removal vehicle” a new definition was added for “intermittent snow removal vehicle” to mean vehicle that is equipped with a snow plow or snow blower mounting attachment and a control system for the plow or blower. This definition is needed to explain the term when referenced in the regulation relative to the newly added exemption for intermittent snow removal vehicles, which is explained later in this document.

Directly affected individuals also indicated the vehicles may be equipped with plow and blower mounting attachments, which are essential equipment for removing snow from roadways and are a primary feature of the vehicle configuration, therefore are necessary to include in the definition. Control systems are necessary to include as

these systems are integral to the operation of such features and are used to move and engage the mechanisms that operate the plow or blower.

This definition was crafted with input from stakeholders that own and operate intermittent snow removal equipment and is therefore generally understood by those directly affected. The definition and exemptions were added in response to stakeholder concerns.

13. In section 2013(b), the definition of “internal combustion engine vehicle” was modified to add “that includes an internal combustion engine”. This change was necessary to ensure that the term included vehicles with such engines and was made to improve the clarity of the definition.
14. In section 2013(b), the definition of “manufacturer” was modified to specify that the term includes those who manufacture yard tractors in addition to on-road motor vehicles throughout the definition. This change was necessary to ensure that the entire definition applies to yard tractors as well as on-road vehicles, as some yard tractors are designed not to be driven on highways, and would erroneously have been left out of the definition if it only applied to on-road vehicles.

Language was also added to the definition to clarify that it includes any intermediate- or final-stage manufacturer that completes vehicle assembly prior to first purchase of the vehicle other than for resale. This addition is necessary to ensure that intermediate stage manufacturers, such as those that alter originally equipped chassis, and final stage manufacturers, such as body builders, upfitters, dealers and distributors, are included in this definition. These entities are integral to the manufacturing of final assembly vehicles. The modified ZEV Purchase Exemption specified the Executive Officer will rely on data gathered from vehicle manufacturers and their websites, so it is necessary to ensure that entities involved in all stages of assembling a vehicle can be used in making the determination whether a vehicle is available to purchase.

15. In section 2013(b), a new definition was added for “mobile ZEV fueling provider” to mean an entity that provides the service of, or is engaged in the sale, rental, or lease of equipment for the purpose of, delivering hydrogen fuel or electricity directly from a mobile vehicle or portable equipment into another vehicle’s fuel tank or battery for other than the dispenser’s own consumption. This definition is needed to identify the types of entities fleet owners must gather information from when applying for the Mutual Aid Assistance exemption. It is necessary to specify that this includes entities that both provide mobile fueling as a service, and those that rent, sell, or lease mobile fueling equipment because both kinds of entities exist and staff expect fleet owners to make a good faith effort to find mobile fueling service and equipment providers to attempt to find a solution that would allow them to utilize a ZEV in mutual aid situations. It is necessary to specify that mobile fuelers would deliver hydrogen or electricity from a vehicle or portable equipment because the definition is specific to ZEV mobile fuelers, and the only two fuels today that can fuel ZEVs are hydrogen and electricity. This fuel can be delivered both from a vehicle under its own motive power, or from portable equipment that is towed behind another vehicle

or placed on the back or in the cargo area of a vehicle, so both types of delivery systems are applicable. Specifying that the fuel would be delivered for other than the dispenser's own consumption ensures the definition does not include fleets that purchase their own mobile fueling solutions and prevents a loophole by which fleet owners could use themselves to justify an exemption request for the Mutual Aid Assistance exemption, which would be a conflict of interest.

16. In section 2013(b), the definition of "model year" was modified to mean the production period as assigned by the manufacturer when certifying an engine or vehicle for sale, pursuant to title 17, CCR section 95662(a)(16). This change was necessary as the language previously pointed only to a California Code of Regulations section that describes the process by which manufacturers must select a model year for a production vehicle. This level of specificity is not necessary for this regulation as the fleet owner is not involved in determining the vehicle model year, so the definition has been modified to refer in plain language to the model year that has been assigned by the manufacturer, rather than just pointing to the procedure by which manufacturers must chose the model year. Manufacturers set the model year when certifying engines or vehicles for sale, so this definition was selected to mirror this fact.
17. In section 2013(b), a new definition for "motor vehicle" was added to mean the same as defined in the California Vehicle Code section 415. This addition was necessary to point to existing California law that already defines this term and was also necessary as this term is used throughout the regulation and a definition of the term was erroneously left out of the original proposal.
18. In section 2013(b), language was modified in the "notice to proceed" definition to change "powertrain conversion installer" to "installer that converts vehicles to ZEVs". This change is necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the requirements of the regulation which is to deploy ZEVs.
19. In section 2013(b), the definition of "pickup truck" was modified in response to stakeholder concerns to include the phrase "a 'pickup truck' with removable bed covers or camper shells installed are considered 'pickup trucks' for the purpose of this regulation". This change was necessary because stakeholders stated the previous definition of pickup truck did not capture whether removable features added to the vehicle without modifying the truck's body could be interpreted to categorize them in other vehicle groups for the regulation. This change ensures only one reasonable and logical interpretation that the vehicles are still considered pickup trucks even with such modifications.
20. In section 2013(b), the definition of "rated energy capacity" was modified to include a source for the referenced test or analysis procedures and to incorporate those procedures by reference in this regulation. This definition is consistent with CARB's Zero-Emissions Powertrain Certification regulations, but that regulation specified the test procedures by which rated energy capacity could be determined. To conform with the Administrative Procedures Act, the test procedures were included from that

certification regulation, ensuring clarity when determining the vehicle requirement for fleet owners.

21. In section 2013(b), new definitions were added for “SAE J1667” and “smoke opacity test”, which were necessary to define the technical requirements and process for producing the smoke opacity test documentation that can be used to meet the odometer recordkeeping requirements of section 2015.5. The specific definitions selected were necessary to reference existing test procedures for performing such tests and to be consistent with other CARB regulations that reference and require the same tests.
22. In section 2013(b), the definition of “vehicle” was modified to remove reference to “motor vehicle”, as a conforming modification with the newly added definition for “motor vehicle”. This definition was also modified to reference a device as defined in Vehicle Code section 670 to ensure this regulation was internally consistent with existing California law. The yard tractor portion of the definition was left in to ensure that off-road yard tractors, or those that are not intended for use on highways, are included in the definition because this regulation applies to such yard tractors in addition to on-road vehicles.
23. In section 2013(b), the definition of “vehicle awaiting sale” was modified to include all new vehicles that are driven to be delivered to a fleet owner, rather than just those driven for the first time to an ultimate purchaser to be placed in service outside of California. The originally proposed definition unintentionally excluded vehicles being delivered in California and limited the definition to vehicles being driven for the first time. Vehicles could be driven multiple times before reaching the fleet owner purchaser, so it was necessary to remove this limitation.
24. In section 2013(b), language was modified in the “vehicle purchase” definition to change “powertrain conversion installer” to “installer that converts vehicles to ZEVs” and “powertrain conversion” to “converting a vehicle to a ZEV”. These changes are necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.

Language was also modified to specify that the term refers to an action the fleet owner is taking, and that “placing an order” is specifically referring to an order to acquire the legal or equitable title to a vehicle, because other orders for vehicles are possible, including parts orders. These changes are necessary to ensure there is one reasonable and logical interpretation of the criteria.

Language was added to the definition to include entering into a lease agreement with a contract term of one year or more as an action fleet owners can take to count as a vehicle purchase. This was necessary because the statement was erroneously excluded, while subsection (D) indicated staff’s intent to include this type of action.

Language was added to indicate “a vehicle purchase does not include renewing a lease vehicle already in the California fleet”. This is necessary to prevent the

unintended consequence of a renewed lease counting as a new vehicle purchase, which would inadvertently require a ZEV purchase, or increase the California fleet size for a fleet owner that is simply renewing a lease for the same truck. This change was made to maintain a level playing field for fleets that lease compared to those that own their own equipment and in response to stakeholder concerns.

Language was added to subsection (A) and (B) to specify that actions taken with authorized dealers and entities that convert vehicles to ZEVs, in addition to manufacturers, would qualify as vehicle purchases under these subsections. This change was necessary to avoid an erroneously narrow definition for purchase agreements or notices to proceed.

Language was modified in subsection (D) to specify that the lease agreement is specific to vehicles being placed in service in the California fleet. This modification is necessary to exclude agreements for leases for vehicles placed in service outside California to count as a vehicle purchase as there would be no emission benefits to California.

25. In section 2013(b), a new definition for "weight class" was added to mean the category of a vehicle's GVWR as specified below. This addition is necessary to conform with modifications to the ZEV Purchase Exemption, which will rely on vehicle weight class to assist in making the determination of whether a vehicle is available to purchase as a ZEV.

Additional subsections (A) through (H) were added or moved from previous definitions to specify various weight class categories, including new definitions for "light-duty", "Class 2b", and "Class 3". All these definitions are consistent with the US EPA classification system for medium- and heavy-duty vehicles which split vehicle categories by GVWR and align with those categories.

26. In section 2013(b), the definition of "zero-emissions powertrain" was modified to point to the correct code section 1956.8(j)(27), because the originally proposed definition erroneously referenced a different code section that was not the definition of "zero-emissions powertrain".
27. In section 2013(b), a new definition of "ZEV fueling infrastructure" was added to mean a fueling system that provides the appropriate type of energy to a ZEV (e.g., electric charging infrastructure or cryogenic fueling tank and dispenser). This definition is necessary to state the type of equipment the ZEV Infrastructure Delay Extension is meant to cover. This definition was selected to be consistent with other CARB regulations for ZEVs and is intentionally written broadly to include other fuel types besides electricity and hydrogen in case a future ZEV fuel type becomes available.
28. In section 2013(c), a new subsection was added to exempt vehicles subject to the Zero-Emission Airport Shuttle regulation from this regulation, because they are already required to be upgraded to zero-emissions vehicles under that regulation and it would be unnecessarily duplicative.

29. In section 2013(d), language was modified to simplify and remove duplicative language. Language was added to specify fleet owners must comply with the schedules specified in subsections (1) or (2). This change was necessary to conform with other changes combining subsections (2) and (3).

Language was also added to allow fleet owners to alternately elect to comply with the ZEV Milestones Option commencing with title 13, CCR section 2015.2 as described in section 2013(e). This change is necessary to provide additional flexibility for state and local government fleets to provide an alternative method to comply with the ZEV Milestones Option. The option is expected to provide about the same emissions benefits and was added in response to stakeholder requests for the option to be made available to them.

Language was added specifying that renewing a vehicle lease for a VIN already in the California fleet shall be considered a continuation of the vehicle's ownership and shall not be considered a new purchase. and to avoid the unintended consequence of a renewed lease counting as a new vehicle purchase, which would prevent fleets from renewing leases of existing ICE vehicles because of the ZEV purchase requirements. This change was made in response to stakeholder concerns and preserves the original intent of allowing fleets to use their existing vehicles until they are replaced.

30. In section 2013(d)(1), language was modified to specify that "except as specified in section 2013(d)(2), fleet owners must purchase ZEVs, or NZEVs as specified in section 2013(f), for their California fleet in accordance with the following schedule". The reference to section 2013(d)(2) is necessary to conform with changes simplifying the general requirements by combining subsections (2) and (3). This change improves readability of the regulation. The NZEV addition was added in response to stakeholder requests to allow a fleet owner to count NZEVs as ZEV purchases for the California fleet. The change would increase compliance flexibility and ease battery-electric range anxiety and infrastructure deployment concerns by allowing NZEVs to be treated the same as ZEVs for a period of time.
31. In section 2013.1(d)(1)(A), (B), and throughout the regulation as noted in this notice, language was modified to change "vehicle additions" to "vehicle purchases". This change is necessary because the regulation requirements are based on vehicle purchases, which is a defined term, and not additions, which ensures only one reasonable and logical interpretation of the criteria.
32. In section 2013(d)(2), language was modified to combine subsections (2) and (3) and to set forth requirements for fleets that meet one of the following criteria to meet a delayed compliance schedule as set forth in section 2013(d)(2)(B) and are not subject to the requirements specified in section 2013(d)(1)(A): its jurisdiction is solely in a designated low population county; it owns, leases, or operates ten or fewer vehicles in the California fleet, as specified in section 2013(k); or its jurisdiction or service area is split between a designated low population county and a non-designated county and at least 90 percent of the service area in square miles is in the designated low population county.

The rationale for including the criteria of jurisdiction in low population counties, or those with split service areas was already in the initial proposal and can be found in staff's Initial Statement of Reasons for the regulation.

Language specifying that the entity owns, leases, or operates ten or fewer vehicles in the California fleet, as specified in section 2013(k) is necessary to provide additional flexibility for public fleets that have few vehicles. This change was necessary to address stakeholder concerns that small public fleets would have less flexibility to selectively choose which vehicles to replace with ZEVs in the first few years of the regulation. The change also addresses an unintended consequence of the rounding requirements that would effectively mean a fleet with 10 vehicles making a single vehicle purchase between 2024 and 2027 would effectively have a 100 percent ZEV purchase requirement due to rounding. These fleets also may have less flexibility in selectively upgrading sites with ZEV infrastructure and may have less access to upfront capital. This change was made in response to direction from the Board at the first hearing for the regulation, as well as stakeholder concerns. The specification that fleet size would be determined by section 2013(k) was made to conform with changes in that section that specify how fleet owners that comply jointly must calculate their California fleet size.

Language about the split jurisdictions was modified to specify that the service area is to be calculated in square miles. This modification is necessary to provide a unit by which the 90 percent requirement can be measured and ensures there is only one reasonable and logical interpretation of the term service area. This measure is commonly used by public fleets to determine the size of their service area.

33. In section 2013(e), language was modified to add the "ZEV Milestones Option Flexibility" to give fleet owners more compliance flexibility. Fleet owners have until January 1, 2030, to elect to permanently comply with the ZEV Milestones Option of title 13, CCR section 2015.2 in lieu of the requirements of the State and local government fleet regulation. If choosing to use this option, fleet owners must comply with all of the requirements otherwise applicable to federal government fleets specified in title 13, CCR sections 2015, 2015.2, 2015.3, 2015.4, 2015.5, and 2015.6. The fleet owner must also report their intention to use this option as specified in section 2013.2(c)(1)(l). After electing this option, fleet owners are no longer subject to and may not switch back to the state and local government fleet requirements specified in sections 2013, 2013.1, 2013.2, 2013.3, and 2013.4." This option is necessary to meet Board direction to provide additional flexibility to fleets that may find it more advantageous to their normal purchasing patterns to follow the ZEV Milestones Option and was made at the request of stakeholders and the direction of the Board at the first hearing. The requirement to opt in by January 1, 2030, reduces the likelihood that the option can be gamed by fleets to reduce compliance obligations, and ensures there is a reasonable cutoff date to simplify implementation of the option. Reporting is necessary because fleets opting in must waive certain protections of the Health and Safety Code, which would be done through the reporting system, to use the option. Fleets must permanently opt in because assessing compliance for fleets switching between a pure ZEV purchase

requirement and a fleet target requirement simultaneously would be confusing for fleets and simplifies implementation and enforcement of the regulation.

34. In renumbered section 2013(f), language was modified in the NZEV flexibility option to expand the use of the option to any NZEV with a 2035 or earlier model year to be counted as a ZEV for the whole regulation, except as specified in the Daily Usage and ZEV Purchase Exemptions. The original proposal erroneously stated that NZEVs would only count as ZEVs for the purposes of compliance with the general requirements of the regulation. This change is necessary to ensure that NZEVs are counted as ZEVs for compliance, reporting, recordkeeping, and enforcement purposes as well. The addition specifying how NZEVs are treated for the ZEV Purchase or Daily Usage exemptions is necessary to conform with changes to those options where delineation between NZEVs and ZEVs is essential. This change also provides more flexibility for fleets to use NZEVs for uses where ZEVs may not be as suitable and would reduce the need for exemptions and extensions associated with vehicle mileage or usage and would reduce the need for infrastructure extensions. This change was made in response to direction from the Board at the first hearing for the regulation, as well as stakeholder concerns.
35. In section 2013(g), language was modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation.
36. In section 2013(h), the language was modified to remove any reference to NZEVs. This change is a necessary conforming modification as section 2013(f) already establishes that certain NZEVs are equivalent to ZEVs for the purposes of the regulation. Therefore, only the term ZEV is necessary. Language was also modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation.
37. In section 2013(i), language was modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation.
38. In section 2013(j)(1), language was added to specify requirements for verifying each fleet a fleet owner hires or dispatches "to operate in California" is listed on CARB's website. This change is necessary to limit the scope of this requirement only to those vehicles hired or dispatched to operate in California as opposed to other states. Language was also added specifying the requirement to verify applied for each calendar year; this is necessary to specify the time frame within which a fleet owner must comply with the verification requirements.
39. In section 2013(j)(2) language was added to allow disclosures of regulation applicability to be provided either in the hiring contract or agreement or as an addendum to the agreement or contract. It is necessary to not require fleets to alter existing contract language and allow for flexibility in how the disclosure is provided, while ensuring that the disclosure is provided as part of the contractual agreement. This change was added in response to stakeholder concerns.

Language was also modified to specify that the website is the CARB Advanced Clean Fleets webpage, not just CARB website, because the CARB website is not all specific to Advanced Clean fleets.

40. In section 2013(k), clarifying language was added in response to stakeholder concerns, to allow for “The California Department of General Services may comply jointly for all State agency fleets under its jurisdiction and must exclude vehicles in subdivisions that opt to comply separately.” This change is necessary as the Department of General Services does not include all state agencies under its jurisdiction, and the originally proposed language would have erroneously prevented that department from utilizing this option.

Language was modified to specify that “if such departments, divisions, districts, subsidiaries, or agencies elect to utilize this compliance option and then subsequently do not fully comply with the applicable requirements of section 2013(d), each of the participating entities must then demonstrate compliance with the requirements of section 2013(d) on an individual basis.” This change helps specify to which requirements such fleet owners must demonstrate compliance.

Language was also added to specify that fleet owners must report, not agencies, to conform with the requirements of the regulation applying to fleet owners.

Language was added to allow fleet owners to complying jointly even if one or more subdivisions opt into the ZEV Milestones Option as specified in section 2013(e). This change was made in response to stakeholder concerns that the previous language would unintentionally not allow fleet owners to comply jointly if a subdivision uses the ZEV Milestones Option.

41. In renumbered section 2013(l), clarifying language was added included changing “addition” with “purchase”, qualifying language was added if a manufacture cancels “a purchase agreement for ZEVs at” any “time before the vehicle is delivered for reasons beyond the control” of the fleet owner in order to establish the fleet owner did not cancel the order.

The language was modified to require a fleet owner to secure a new purchase order for ZEVs no later than one year after the manufacturer’s cancellation notice. This change is necessary to recognize public fleet bid processes may necessitate additional time, and to specify that fleets will have 365 consecutive days (one year) to obtain this purchase order.

Language was also modified to require the fleet owner submit to TRUCRS@arb.ca.gov the manufacturer cancellation notice within 30 days of the cancellation, and the new purchase order for ZEVs within 30 days of placing the order to maintain compliance. This change is necessary to ensure staff have sufficient documentation to prove that the manufacturer cancelled the order for circumstances outside of the fleet owner’s control, and that the fleet owner has secured another purchase order for ZEVs within reasonable timeframes that allow the fleet flexibility

to have a full month to report the change to CARB while ensuring staff are made aware of the change to effectively implement the option.

In addition, language was added stating that if no other ZEV is available, the fleet owner may apply for the ZEV Purchase Exemption. This change is necessary to address situations where a cancelled order was for the only ZEV of that configuration available, and a fleet would be out of compliance for reasons beyond their control.

42. In section 2013(m), language was added to specify a start date of January 1, 2024, for determining annual compliance. This was erroneously excluded from the original proposal and is included to provide a clear start point for compliance determinations. Language was also modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation.
43. In section 2013(n)(1), language was added to allow purchase of a used ICE vehicle to be used as a backup vehicle. This change was made in response to stakeholder concerns that requiring a new ICE vehicle to be limited to 1,000 miles annually would be unreasonably burdensome on the vehicle's payback and use for the fleet owner. Language was also modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation. Language about excluding emergency miles was removed because it is already specified in the Backup Vehicle Exemption language in section 2013.1(a).
44. In section 2013(n)(2), language was modified to clarify that fleet owners must request and obtain an exemption pursuant to criteria specified in section 2013.1(b). This was necessary to specify that fleet owners must request and be approved for an exemption, as the previous language may have been interpreted to mean an exemption would be automatically granted.

Language was removed specifying that fleet owners would qualify for the exemption if available ZEVs could not be placed anywhere in the fleet while meeting the daily usage needs of an existing vehicle in the fleet and placed in the criteria of 2013.1(b). This modification was necessary to improve the readability of the regulation by placing this with the other exemption-specific criteria.

Language was also modified to change "additions" to "purchases" to reflect conforming changes to the general requirements of the regulation.

Additionally, language was added to specify that the application window is no earlier than the 13th model year of the ICE vehicle being replaced. This is necessary to ensure that exemptions to purchase ICE vehicles are not requested prematurely within the normal useful life of a vehicle, reduces administrative burden, and reduces the likelihood that fleet owner elects to replace a vehicle early to avoid purchasing a ZEV as more become available.

45. In section 2013(n)(3), the description of the title was modified from "Infrastructure Construction Delay Extension" to "ZEV Infrastructure Delay Extension" to reflect the change that the section was expanded to include utility delays and conform with changed made to the name of the extension.

Language was removed referencing excusing fleets from taking immediate delivery of ordered ZEVs for one year, and modified to establish that fleet owners may request a temporary extension to count an ICE vehicle that being replaced as a ZEV purchase when determining compliance with the ZEV purchase requirement of section 2013(d). This change is necessary to conform to changes in the extension. This change is also necessary to improve the readability of the regulation by moving criteria for the extension, including extension time frames, to the extension language in section 2013.1.

Clarifying language was added that specifies the application window is no earlier than the 13th model year of an ICE vehicle to be replaced. This is necessary to ensure that exemptions to purchase ICE vehicles are not requested prematurely within the normal useful life of a vehicle, reduces administrative burden, and reduces the likelihood that fleet owner elects to replace a vehicle early to avoid purchasing a ZEV as more become available.

46. In section 2013(n)(4), language was modified to change the exemption name from "ZEV Unavailability Exemption" to "ZEV Purchase Exemption" based on comments from stakeholders and to conform with changes made to the name of that exemption. Language was added to specify that fleet owners must use the exemption in section 2013.1(d)(1) or request the exemption in section 2013.1(d)(2) no earlier than when the model year of the ICE vehicle being replaced reaches 13 years old. This is necessary to ensure that exemptions to purchase ICE vehicles are not requested prematurely within the normal useful life of a vehicle, reduces administrative burden, and reduces the likelihood that fleet owner elects to replace a vehicle early to avoid purchasing a ZEV as more become available.:
47. In section 2013(n)(4), a new subsection (A) was added to specify that fleet owners shall receive an exemption from the ZEV purchase requirements specified in section 2013(d) to purchase a new ICE vehicle pursuant to the criteria specified in section 2013.1(d)(1). This is necessary to specify how the exemption would work for fleet owners purchasing vehicles off the ZEV Purchase Exemption List specified in section 2013.1(d)(1).
48. In section 2013(n)(4), a new subsection (B) was added to specify that fleet owners may request and obtain an exemption from the ZEV purchase requirements specified in section 2013(d), pursuant to the criteria specified in section 2013.1(d)(2), to purchase a new ICE vehicle. This is necessary to set forth how the exemption would work for fleet owners that request and obtain an exemption to purchase an ICE vehicle through the ZEV Purchase Exemption Application process.
49. In section 2013(n)(5), language was modified to specify fleet owners must request an exemption from the ZEV purchase requirements to purchase new ICE vehicles pursuant to the criteria specified in section 2013.1(e). References to the 25 percent fleet limit were removed from this section and moved to the description of the Mutual Aid Assistance exemption in section 2013.1. These changes were made to improve the readability of the regulation and set forth clear requirements to request

exemptions and clarify how the exemption would work for fleet owners subject to the ZEV purchase requirements.

Language was added specifying ICE vehicles purchased pursuant to a granted exemption may operate as part of the regular California fleet and are not restricted solely to mutual aid functions. This change was made in response to stakeholder concerns that the language could be interpreted as requiring vehicles purchased pursuant to the exemption to only be used for mutual aid. This change ensures there is only one logical and reasonable interpretation that there is no such restriction.

50. In section 2013(n), a new subsection (6) was added specifying fleet owners shall receive an exemption from the ZEV purchase requirements specified in section 2013(d) until January 1, 2030, for designated intermittent snow removal vehicles. Fleet owners may request the Executive Officer designate vehicles added to the California fleet prior to January 1, 2030, as intermittent snow removal vehicles pursuant to the criteria in section 2013.2(k). This addition is necessary to specify what this exemption allows, and which intermittent snow removal vehicles are eligible for this exemption. Limiting the application for vehicles added to the fleet prior to January 1, 2030, gives fleets with these vehicles flexibility to not have to include the vehicles in the calculation when determining the amount of ZEVs a fleet needs to purchase. January 1, 2030, was selected as the cutoff because more ZEV models are coming on the market every year, and staff expect that improvements to the technology by then will bring intermittent snow removal ZEVs to market. These vehicles have unique duty cycles that may be more challenging to electrify in the near-term. Additionally, they are multi-purpose vehicles, typically operated by public fleets with a mandate to remove snow from roadways and are repurposed after the snow season to perform other public services. Executive Officer review is necessary to ensure that only vehicles meeting the definition are included.
51. In section 2013(n), a new subsection (7) was added to include an exemption by which fleet owners may request and obtain an exemption from the ZEV purchase requirements if a vehicle is non-repairable due to an accident or other onetime event due to circumstances beyond the fleet owner's control, such as fire or catastrophic failure, that damages the vehicle such that it is not repairable. It is necessary to specify that the exemption applies in case of accidents or onetime events to close a loophole by which fleet owners whose vehicles become non-repairable due to deterioration or wear and tear from normal use would qualify. This would allow a fleet owner to purchase and add to the California fleet a used ICE vehicle of the same configuration and same or newer model year to replace a vehicle that is non-repairable no later than 180 calendar days after the vehicle becomes non-repairable. This purchase window is necessary to provide sufficient time for fleet owners to identify and purchase a used vehicle to replace the non-repairable vehicle. 180 days was selected because it is a reasonable amount of time to purchase a used vehicle, which are readily available through used truck marketplaces, while balancing the need to not have an open ended timeframe that could be a loophole.

Fleet owners must report the replacement vehicle within 30 days of adding the vehicle to the California fleet to ensure timely updates to their compliance obligation and for CARB to be made aware of this change. Fleet owners would need to apply by submitting documents, photos, and information to TRUCRS@arb.ca.gov before adding the used vehicle to the California fleet.

This exemption allows for an exception from the ZEV purchase requirement without changing the schedule the owner would be required to upgrade their vehicles to ZEVs. This change maintains a level playing field and addresses an unplanned event without changing expected emissions reductions.

Requiring the same configuration and same or newer model year engine is necessary to ensure the replacement vehicle is in fact a replacement and not an expansion of the fleet, and that dirtier engines are not incorporated into the California fleet than what was rendered non-repairable.

Requiring reporting within 30 calendar days of adding the vehicle to the fleet is necessary to give the fleet owner sufficient time to report their new vehicle and aligns with reporting timeframes for other fleets making changes to the California fleet outside the reporting period.

Requiring fleets request and obtain extensions by submitting information to TRUCRS@arb.ca.gov before the used vehicle is added is necessary as it provides clear direction on how and when to apply and allows CARB staff to review requests and determine whether the criteria have been met.

The information required to be submitted is necessary to ensure the vehicle is non-repairable, and that the replacement is of the same configuration. Police reports or insurance statements are generally recognized as reliable documents that indicate whether a vehicle has been in an accident, and whether it is non-repairable. Including a signed attestation from a fleet's governing board recognizes and addresses stakeholder concerns that state many public agencies self-insure, and that not all accidents result in police reports. This provides a necessary pathway for these fleets to utilize this option, while protecting against forming a loophole by requiring signed attestation from a governing board that could be held publicly accountable for submitting false information. The VIN is necessary to identify the vehicle in the fleet that is being replaced and which vehicle is replacing it. The photographs are necessary to identify the replacement vehicle, and that it is in fact of the same configuration of the vehicle being replaced.

52. In section 2013(p), language was modified to specify that the vehicles referenced in the section were in fact vehicles acquired with funds issued by the State-provided incentive funding programs. This change is necessary to ensure no more than one reasonable and logical interpretation of this criteria.
53. In section 2013, a new subsection (r) was added to require fleet owners selling vehicles subject to the regulation to provide a disclosure of regulation applicability warning the potential buyer the vehicle may be subject to CARB requirements. This

provides protection to buyers that may not be aware of the regulation from purchasing a vehicle that may need to be replaced sooner than otherwise expected. The specific language included is necessary as it supplies a reasonable warning to a purchaser and a website link where more information can be found about the regulation. The requirement is also necessary to improve compliance and enforceability of the regulation, as it would ensure buyers are aware of potential requirements for the vehicle they would purchase.

54. In section 2013, a new subsection (s) was added to require any new ICE vehicle purchases added to the California fleet after January 1, 2024, be certified to applicable California emissions standards and emissions related requirements, and for used ICE vehicles to have a 2010 or newer model year engine when adding used vehicles to the California fleet. Beginning 2024, California certified engines will have lower emissions than engines certified to federal emissions standards. Without this requirement fleet owners would be able to purchase vehicles out of state and operate them in California which would result in more polluting vehicles on California's roadways for vehicles intended to be operated in the California fleet. This change is necessary to ensure new ICE vehicles purchased during the regulation timeframe are held to the least polluting applicable emissions standards. This change ensures California certified engines are added to the California fleet when ZEVs are not otherwise required and this change results in additional criteria pollutant emissions benefits, as compared to the original proposal.
55. In section 2013, a new subsection (t) was added to exempt Transit Agencies subject to the Innovative Clean Transit (ICT) regulation commencing with title 13, CCR section 2023 from the regulation until January 1, 2030. This section was added because Transit Agencies subject to ICT are already making investments to transition their transit bus fleet to ZEV. Any additional ICE vehicles in transit fleets that are not subject to ICT will start to transition to ZEV after January 1, 2030, this change will give transit agencies more time to transition vehicles not subject to ICT to ZEVs.

(B) Section 2013.1

1. In section 2013.1, clarifying language, "report to" was added to ensure a fleet owner knows there is an approval process and the words, "approved for" was replaced with the phrase "granted to". These changes are necessary to prevent more than one reasonable and logical interpretation of the criteria.
2. In section 2013.1(a), language was changed to clarify that criteria used to determine whether a backup ICE vehicle can be operated is listed in the same section, the definition of "backup vehicle" was removed, and "immediately stop being operated" was replaced with "cannot be operated" because fleet owners are not allowed to operate the backup vehicle in California once the vehicle no longer meets the criteria specified in this section. Language was also added to specify that the reporting period referenced is the March reporting period as specified in section 2013.2(b); this is necessary to specify to which reporting period the language was previously referring.

3. In section 2013.1(b), language was removed that required ICE vehicles operating under the Daily Usage Exemption to have a GVWR above 14,000 lb. to meet Board direction to streamline criteria for the regulation's flexibilities and to allow Class 2b-3 vehicles to be eligible for this exemption. Language was modified throughout this section and its subsections to delineate between battery-electric vehicles and fuel cell electric vehicles to improve the readability of the regulation, and to ensure there is only one reasonable and logical interpretation of the requirements. Language was also added to let fleet owners know the time duration for this exemption to purchase a new ICE vehicle of the same configuration is one year (365 consecutive days). This change is necessary to recognize public fleet bid processes may necessitate additional time. This language was moved from earlier in the regulation language to this section because it is a common criterion for both compliance pathways and was made to improve the readability of the regulation. Language was added to refer a fleet owner to other sections in the regulation that explain the action the fleet is requesting an extension for, e.g., ZEV Purchase requirement. This is necessary to link to the action the fleet owner is requesting an extension for, to the appropriate compliance schedule and criteria established in this section. "New" was added in front of "ICE vehicle" because it was erroneously omitted from the original proposal and is necessary to ensure the ICE vehicle purchased by the fleet owner under this exemption has the best emissions controls possible. Language specifying that "fleet owners may not apply" was modified to "The Executive Officer will not approve exemption requests" to conform with other modifications in the regulation where the Executive Officer may make such determinations, while allowing the fleet owner to apply. Language was added to specify fleet owners would not be able to apply for the exemption for a Class 2b or 3 BEV with a rated energy capacity of at least 150 kilowatt-hours. This change is necessary to conform with changes made to remove the GVWR limitation, and to ensure there is a sunset when vehicles with an equivalent of around 250-mile range (based on a selected 0.6 kilowatt-hour per mile efficiency as described in the rationale for section 2013.1(b)(3)). It is necessary to apply limitations to the exemption for when ZEVs are commercially available with rated energy capacities that would meet most fleet needs. 250 miles is more than enough range for most fleet needs according to the one-time reporting data collect from affected fleets. When ZEVs are available with these ranges, the exemption would no longer be needed. Language was added to require fleet owners to first check to make sure there is a ZEV available in the same weight class and with the same configuration as the ICE vehicle that needs to be replaced, then to show by demonstrating the daily usage needs for the remaining ICE vehicles in their fleet cannot be met by the available ZEVs. The language, "in granting or denying the exemption request" was added to qualify the existing language "Executive Officer will rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria specified in section 2013.1(b)" that was moved to a new subsection (6) at the end of the section.
4. In section 2013.1(b)(3), reference was added to ensure the comparable ZEV range identified in the previous section (2) is the same as that used to calculate the

equivalent ICE vehicle daily energy needs. Language was added to specify that Class 2b-3 vehicles would use a conversion factor of 0.6 kilowatt-hours per mile. The factor was established from in-use and dynamometer data across a wide range of vehicle types and classes in the report "Battery Electric Truck and Bus Energy Efficiency Compared to Conventional Diesel Vehicles", which is available with hyperlink in the rationale for the Advanced Clean Fleets Initial Statement of Reasons. These factors rely on the same source data as the factors used in CARB's cost analysis for this staff report but are slightly different due to simplification needed for the cost analysis. The calculations and results are necessary to submit so CARB can assess them and ensure calculations were performed correctly. Previous section (6) was moved to subsection (A), and language was changed from "Optionally substantiate their exemption request by submitting" to "in lieu of calculating range as specified in section 2013.1(b)(3)", to inform a fleet owner that the actual data measurements submitted under this subsection are used as criteria instead of the range calculations in section (3). Also, language was removed referencing vehicle energy use data being submitted from a vehicle "in the fleet's service" in response to stakeholder concerns about not being able to submit demonstration vehicle data from a ZEV manufacturer to substantiate Daily Usage Exemption requests. This change provides also provides additional flexibility for fleet owners to use data from ZEVs purchased by other fleets to substantiate daily energy use. This change was also made in response to the Board's direction to streamline the exemption processes and criteria. Language was added to include the vehicle miles travelled per day because it was erroneously excluded from the original proposal and is needed as criteria under this exemption. Additionally, language was modified from requiring one month of data, to requiring five consecutive business days of data. The modification to the timeframe of data required is necessary to reduce the burden of data collection on fleet owners, and time needed by staff when evaluating if the information submitted by the fleet owners meets the exemption criteria. Finally, language was added to require energy used to drive the vehicle, and language was added to require energy used while stationary plus operating hours for vehicles that operate truck mounted or integrated equipment while stationary. These changes are necessary to ensure staff will have sufficient information to compare the energy use of truck equipment, often operated while a combustion vehicle's engine is idling to engage a power take-off unit, to the energy use submitted for ZEVs on similar daily assignments.

5. In section 2013.1(b)(4), "industry accepted" was deleted because it needed more specificity and was replaced with "data collection system that tracks daily mileage and energy use, and hours of vehicle operation if applicable", i.e., an explanation of telemetry data equivalence. Language "and energy used to drive" was added to ensure that driving energy could be compared to auxiliary equipment that uses power in the daily usage reports. Language "ICE" and "of the same weight class and configuration of the vehicle to be replaced" was added to ensure the fleet owners are submitting the daily usage report for the ICE vehicle they are requesting the exemption for. Lastly, the word "either" and "or the energy use data submitted per section 2013.1(b)(3)(A)" was added to make it clear to a fleet owner that the ICE

vehicle daily usage report is compared to the equivalent, available ZEV calculated energy capacity converted to miles (3) or measured data (3)(A), but not both. Subsection (A) was modified by replacing the less specific language, "daily equipment usage information such as hours of operation" with "the energy used while stationary and number of hours such truck mounted or integrated equipment is operated each day, for at least 30 consecutive workdays from within the last 12 months" to be sure the auxiliary equipment data usage report includes the number of hours the equipment is operated each day within the data collection time frame identified in (4). This data is needed to compare to the ZEV data submitted in subsection section (3)(A). Language was added at the direction of the Board and to address stakeholder concerns allowing fleet owners that have a mutual aid agreement to send vehicles to assist other entities during a declared emergency event to alternatively submit this report from within the last 60 months. This change recognizes that a fleet owner's vehicles may not be dispatched to support emergency events every year and conditions may change from year to year. Stakeholders indicated that the specifications for their vehicles are based on worst case scenarios, and this change would allow them to pick a timeframe from anywhere within the last 5 years to document the usage. However, staff still will require the top 3 values be thrown out to ensure that the fleets are making progress towards their electrification goals and obligations and that fleet owners can reasonably make adjustments in how they manage their fleets. Additionally, the mutual aid exemption already allows up to a quarter of the fleet to be retained as ICE vehicles for the purpose of these worst-case response scenarios, and not throwing out the outliers would effectively create a loophole by which fleet owners could always pick the worst-case scenario to justify an exemption.

6. In section 2013.1(b)(5), language was modified to add "Submit", change "vehicle types" to "vehicle configurations", change "commercially available ZEVs" to "BEVs available to purchase", and "ZEV charging or fueling" to "ZEV fueling infrastructure". These changes are necessary to conform with other modifications made to the regulation language and improve readability and internal consistency of the language. The change from "commercially available ZEVs" to "BEVs available to purchase" was necessary to conform with changes to the Daily Usage exemption, as explained in the rationale for section 2015.3(b) in this document.
7. In section 2013.1(b)(6), language was modified and moved from section 2015.3(b) to subsection (6) specifying that "In granting or denying the exemption request, the Executive Officer will rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria specified in section 2015.3(b)". This change is necessary to conform with other changes to the regulation exemptions where the Executive Officer's determination was moved to the end of the exemption section to improve readability and flow of the language. The necessity of the original inclusion is described in the Advanced Clean Fleets Initial Statement of Reasons.
8. In section 2013.1(c), language was modified to introduce the infrastructure delay extensions which includes construction delays and was expanded to also include site

electrification delays. Language was added to refer a fleet owner to other sections in the regulation that explain the action the fleet owner must take to request extensions. This is necessary to link to the action the fleet owner is requesting an extension for, to the appropriate compliance schedule, and criteria established in this section. Clarifying language, "due to circumstances" was added because it was erroneously omitted. Language, "Fleet owners may only apply for the following extensions for ICE vehicles being replaced at the site experiencing the delay" was added to clarify the extension may only apply vehicles that need to be replaced by ZEVs at the site experiencing the delay. This should limit the extension requests to those vehicles associated with the site being upgraded. Language was added extending this extension to fleets who have entered into a contract of one year or longer to charge or fuel their ZEVs at a single location prior to beginning the infrastructure project. This was added in response to stakeholder concerns that third-party offerings including "infrastructure as a service" would not be eligible for this extension. The language added clarifies that a fleet who has contracted for infrastructure installation regardless of whether the equipment is leased or owned is still eligible to apply for this extension. This section also adds language to inform fleet owners that they must apply for this extension "at least 45 calendar days prior to the next applicable compliance date for CARB to consider the request". This is necessary to establish a reasonable time period for staff to consider a complete extension application before the next compliance date where staff must respond within 45 days of complete request being filed.

9. In section 2013.1(c)(1), clarifying language, "due to circumstances" was added because it was erroneously omitted. In addition, the timeframe of this extension was extended from one year to up to two years and the language, "beginning on the applicable compliance date for the number of vehicles that qualify for the extension" was added to clarify the extension would start on the compliance date that was used to qualify for the extension. The additional time is necessary to meet Board direction to provide more time for infrastructure development and clarification on when the extension would start is necessary to provide more certainty. Finally, the language, "The Executive Officer will grant a single extension per project to delay the vehicle delivery for one year if they determine the fleet owner satisfies the criteria for the delay, based on the information submitted below and the exercise of good engineering judgment" was moved to a new section (E) which follows the time sequence of steps for the Executive Officer's determination.
10. In section 2013.1(c)(1)(A), language specifying supporting documentation used to substantiate their request for a construction-related delay was added. The fleet owner's construction permit issuance date must be at least one year before the next applicable compliance date for the fleet owner to be eligible for the extension. This change is necessary to ensure documentation submitted by the fleet to apply for this extension has specific information that can be used to determine their eligibility.
11. In section 2013.1(c)(1)(B), the language "that occurred after" was added to clarify that circumstances beyond the fleet owner's control had to have occurred after the construction permit was issued and the above section (A) is now referenced to let a

fleet owner know of the timeline for establishing eligibility. Language “delay in manufacture and shipment of zero-emission charging and fueling infrastructure equipment” was added as a new criterion to justify circumstances outside fleet owners’ control during the infrastructure construction project. This change is necessary to meet Board direction to provide additional time for infrastructure development, to align with CARB’s other Zero-Emission technology regulations, and in response to stakeholder concerns about recent supply chain constraints and unforeseen issues related to obtaining necessary equipment critical to ZEV deployments. Additional language was added to clearly state “delays due to unexpected safety issues” must be “on the project.” This is necessary to qualify the safety issues must be related to activities conducted at the construction project site, not those from traveling to or from the project site or those unrelated to the construction project itself. Finally, “ZEV fueling” was added to qualify the term infrastructure for clarity.

12. In section 2013.1(c)(1)(C), the language “ZEV fueling was added to qualify the term infrastructure. This change is necessary to ensure there is only one reasonable and logical interpretation of the criteria.
13. In section 2013.1(c)(1), language was moved from 2013.1(c)(1) to a new section (E) which follows the time sequence of steps for the Executive Officer’s determination. This language is necessary to explain the process used by the Executive Officer in making their determination which was modified to remove the 1-year duration because it is discussed in subsection (A). Finally, the vehicle delivery delay was deleted because it is a separate extension that is used by a fleet owner for another reason besides infrastructure construction delays.
14. In new section 2013.1(c)(2), language was added to create a new “ZEV Infrastructure Site Electrification Delay” extension that allows a fleet to remain in compliance while experiencing a delay in obtaining power from a utility before their project construction project begins. The original “Infrastructure Construction Delay Extension” language in section 2015.3(c)(1) also includes a “delay in obtaining power from a utility” as an eligible criterion to extend compliance deadlines, but that is after construction begins. This new extension was added in response to stakeholder concerns that some requests for site power may require utility service upgrades that would delay the start of their construction, and Board direction to address these concerns. Language was added to sunset this extension on January 1, 2030, which is reasonable because this date is at least six years after the effective date of this regulation and when staff expect most infrastructure construction projects should have already been initiated and planned out for several years. Therefore by 2030, utilities should be aware of most locations where site upgrades would be needed. The extension would apply to delays in power needed for charging equipment and electrolyzers used in the production of hydrogen. The modifications were needed to recognize fleet’s acting in good faith who are met with circumstances beyond their control when requesting upgraded or new electricity service from a utility. This addition is necessary to balance Board direction to provide more time for

infrastructure delays if they occur while continuing to deploy the same number of ZEVs that would otherwise be deployed.

15. In new section 2013.1(c)(2)(A), language was added to specify the time period for eligibility under the new site electrification delay language. Language was added to let fleet owners know the length of the initial extension is based on the utility information and manufacturer estimated delivery dates, and can be up to three years. Language was added to let a fleet owner who was granted an initial three-year extension, know they can request an additional two years, thereby allowing this extension to extend for as long as five years. Additional language was added to let a fleet owner know that to renew their initial extension, they must submit updated supporting documentation at least 45 calendar days prior to the expiration of their initial, granted extension. 45-days was selected as a reasonable amount of time for a fleet owner to apply for a renewal and is consistent with the time for staff to review the request. The language was added to ensure the fleet owner knows the renewal request requires they submit new, additional or updated information from the utility substantiating their on-going delay in obtaining site power before the initial three-year extension expires.
16. In new section 2013.1(c)(2)(B), "Number of Vehicle Extensions" language was added that describes CARB's process for determining the number of extensions the fleet owner may request, based on information submitted in subsection (C). Compliance with the regulation is determined by the composition of ZEVs in the fleet or vehicles that would be replaced with ZEVs. This section informs a fleet owner they may request this extension only for the number of ZEVs and associated charging or fueling equipment that the utility is unable to supply sufficient power. Language was added to inform a fleet owner that the extension will be approved for the number of ZEVs that cannot be supported and the fleet owner must deploy the maximum number of ZEVs that can be supported through each year of the requested delay. Additionally, the information requested would need to be provided by year to ensure it is consistent with compliance requirements, and to define the duration of the extension.
17. In new section 2013.1(c)(2)(C), language was added letting a fleet owner know what information to submit and the email address to submit it. The information (1) is a copy of the application to the utility requiring site electrification that is consistent with the number of ZEVs the fleet owner must deploy each calendar year to meet their compliance requirements during the requested extension period, and (2) the utility's response showing that the project will take longer than a year were added to leverage information that is already being shared between a fleet and the utility as part of their site electrification agreement. These two pieces of information establish the need for the delay. It is necessary that the fleet owner's application be for service that is consistent with the number of ZEVs the fleet owner must deploy to meet their obligation to ensure the application process is not gamed if a fleet owner were to ask for service for many more vehicles than they actually need to comply, and thus artificially inflate the time it would take a utility to serve that need. Language was also added to give a fleet owner flexibility if a utility is unable or unwilling to execute

a contract to move forward with a project, to instead submit the initial application to the utility requesting site electrification and a signed attestation from the utility stating they will proceed with the project. The executed contract between the utility and the fleet or signed attestation is proof that the infrastructure project will proceed. The reason these documents are requested besides providing important information for (4.), is they provide assurance the project will proceed and when it can be built out. The supporting documentation under (3.) is to get an estimated completion date even if the estimated completion date could be on supporting documentation already discussed, such as the initial or executed contract, or application for site power, as the estimated completion date may have shifted based on information from the utility. Language was added to require fleet owners provide an estimated ZEV delivery date so staff can align the granted extension timeframe with the estimated ZEV delivery and estimated date the infrastructure will be ready. This is necessary to ensure fleets do not apply for extensions that are not needed and to avoid granting extensions for longer periods of time than necessary. Fleets are expected to plan ahead to place ZEV purchase orders in time to receive the vehicles by the time the infrastructure is ready. Language was added to specify that documentation includes an estimate of the amount of electrical capacity in kilowatts the utility can supply to the site within one year of the extension request, and for each year of the requested delay to ensure staff would have sufficient information to assess how many ZEVs could be deployed and how many extensions would be warranted in the case of such a delay. In addition, language was added requesting the fleet owner to submit the reason for the delay. This reason this is included is to provide more information as to what could be causing the delay in obtaining grid power from the utility.

Language was added to require information about the ZEV fueling infrastructure equipment the fleet owner can install consistent with the utility's capacity estimate and the associated number, configuration, and weight class of the ZEVs that can be supported by such equipment within one year of the extension request, and for each year of the requested extension. The number, type, and rated capacity for chargers in kilowatts, and for hydrogen stations, dispensing capacity in kilograms per day and the electrical demand in kilowatts are also required. This language was added to clarify that the documentation provided in (1) must have this information as this is what staff will use to determine compliance with the regulation depending on what schedule the fleet is following (model year or milestone). Language was added in (5) to let fleet owners with multiple sites where vehicles are domiciled know they must submit a copy of each site's infrastructure capacity evaluation from the utility or a third-party licensed professional electrical engineer with the information required to be submitted in subsections (3.) and (4.). This initial site capacity assessment could also be the same information provided in the initial or executed contract, or application with the utility used as supporting evidence in the application, or it could be done as a preliminary evaluation by the utility or a third-party licensed professional electrical engineer. Flexibility to submit preliminary site infrastructure capacity evaluations from a licensed professional electrical engineer was added to

give a fleet owner control over the process, however the person performing site capacity load calculations must be qualified and licensed to perform the work. This language was added to ensure the fleet needs the extension, i.e., the fleet owner does not have enough existing capacity at their other sites to meet their applicable compliance dates.

18. In new section 2013.1(c)(2)(D), Language was added to inform a fleet owner that the Executive Officer will grant an extension for the time-period specified in section (A) and number of vehicles specified in (B) if they determine the fleet owner satisfies the criteria for the delay, based on the information submitted in (C), and the exercise of good engineering judgment language was added to inform the fleet owner the Executive Officer's determination is based on engineering and submitted information.
19. In section 2013.1(d), language was modified from "ZEV Unavailability Exemption" to "ZEV Purchase Exemption" based on comments from stakeholders. Language was modified to establish that fleet owners may request exemption(s) either under the ZEV Purchase Exemption List or the ZEV Purchase Exemption Application if a needed ZEV or NZEV configuration is not available to purchase. This is necessary to refer to the action the fleet owner is requesting an exemption for, the appropriate compliance schedule, and the criteria established in this section. Language referring to the Executive Officer maintaining a list of unavailable vehicle configurations and the vehicle configurations excluded from this list was modified and moved to section 2013.1(d)(1). Additionally, language was modified throughout section 2015.3(e) and its subsections to specify that the exemption applies to both ZEVs and NZEVs. This addition is necessary to clarify the requirement that the requirement applies to both ZEVs and NZEVs, and that fleet owners would not be granted exemptions to purchase ICE vehicles if either a ZEV or and NZEV are available to purchase in the needed configurations. Because NZEVs count the same as ZEVs for purposes of the regulation, this addition was necessary to clarify that for this exemption, a delineation needs to be made.
20. In section 2013.1(d) a new subsection (1) was added to introduce this exemption as the "ZEV Purchase Exemption List". Language was added to establish that the list will specify vehicle configurations not available for purchase as a ZEV or NZEV, and the date the exemption would expire for listed configurations determined to be available as specified in section 2015.3(d)(2)(G). It is necessary to specify what information the list will contain, and that it would include an expiration date of the extension so fleet owners would have sufficient notice when a vehicle would be removed from the list to plan their purchases and infrastructure. The list will be maintained on the CARB Advanced Clean Fleets webpage no later than January 1, 2025. This streamlined approach and specified posting date was added in response to stakeholder comments. It is necessary and reasonable to clarify a date in which fleet owners can anticipate the posting of the list. January 1, 2025, was selected because applications to comply with the first 2025 compliance dates for replacing vehicles will be coming in during 2024, and this information will help the Executive Officer to populate the list. This will save time and investment for fleet owners

applying for the extension in the future. The URL for the CARB Advanced Clean Fleets webpage was added for completeness and specificity. Language was added to specify that configurations on the list would include those specified in subsection 2013.1(d)(1)(A). Language was added to specify that the Executive Officer will rely on the information submitted and gathered in subsection (2) and utilize their good engineering and business judgement to determine if the information establishes that the criteria in subsections (C) through (G) are met in determining whether to add or remove a vehicle configuration from the list or to identify the expiration date for a vehicle configuration on the list. This addition is necessary because CARB needs to analyze the given information to determine the availability status of a vehicle configuration. Language was modified to add that the list would not include any buses because they are widely available as ZEVs. Any fleet-specific needs like luggage compartments on motorcoaches could be evaluated based on a fleet-specific exemption process. More rationale for excluding other bus types can be found in the Advanced Clean Fleets Initial Statement of Reasons.

Finally, language was removed to allow for configurations that may not be available for purchase as a ZEV or NZEV with a GVWR less than 14,000 lbs. from the list. This change is necessary to meet Board direction to address potential unique situations where Class 2b-3 vehicles may not be available as ZEVs or NZEVs in the configuration needed.

21. In section 2013.1(d), a new subsection (1)(A) was added to specify the vehicle configurations that would be listed. These vehicle configurations were determined to be the most common body types of the vehicles reported in the Large Entity Reporting, available at https://ww2.arb.ca.gov/sites/default/files/2022-02/Large_Entity_Reporting_Aggregated_Data_ADA.pdf, which is explained in more detail in staff's Initial Statement of Reasons for the Advanced Clean Fleets rulemaking. This list was adjusted to remove vehicle configurations that are widely available as ZEVs.
22. In section 2013.1(d), new subsection (2) was added to introduce the "ZEV Purchase Exemption Application" process in which fleet owners may request an exemption to purchase a new ICE vehicle of the same configuration as an ICE vehicle being replaced. This addition is necessary to accommodate more fleet-specific situations in which an available ZEV or NZEV does not meet the fleet's needs. Requiring that the new ICE vehicle be of the same configuration as the one being replaced is necessary because it would be unreasonable for a fleet owner to purchase a new ICE vehicle of a different configuration as the point of the exemption is to accommodate fleets when a ZEV or NZEV of a needed vehicle configuration is not available for purchase. Language was also added to let fleet owners know the time duration for this exemption to purchase a new ICE vehicle of the same configuration is one year (365 consecutive days). This change is necessary to recognize public fleet bid processes may necessitate additional time.

The fleet owner must submit the applicable information to TRUCRS@arb.ca.gov. This addition is necessary for fleet owners to understand where to submit their

application. Language was added to specify that the Executive Officer will rely on the information submitted and gathered in subsection (2) and utilize their good engineering and business judgement to determine if the information establishes that the criteria in subsections (C) through (G) are met. This addition is necessary because CARB needs to analyze the given information to determine the availability status of a vehicle configuration.

23. In section 2013.1(d)(2), new subsection (A) was added to list the information about vehicle configuration needed by the fleet owner. This addition is necessary so fleet owners obtain the required documentation to qualify for the exemption. Subsection (1) was added to specify that the make, model, weight class, configuration, and whether the vehicle has a crew cab, cabover, or all-wheel drive must be submitted for exemption consideration. These items are common configurations and will have basic information about the types of chassis that may be suitable to be equipped with the needed body. This change is necessary to clarify the vehicle configuration details of the existing ICE vehicle to be replaced. The qualifiers, "clear and legible" and "of the entire left and right sides of the vehicle with doors closed showing the vehicle's body configuration" was added to clarify the condition and types of photographs that would meet the criteria staff could use to verify the existing vehicle's configuration. Clear and legible photos showing both sides of the existing vehicle are required to verify the vehicle configuration details for the existing ICE vehicle to be replaced.

Subsection (2) was added to include a list of any frame attachments other than the body itself necessary to support or perform the primary intended function of the vehicle. This addition is necessary to account for machinery integrated to the chassis or primary vehicle body configuration that provides the connection and working parts necessary for the body to function as an integrated whole. Language was added to provide some examples of frame attachments, such as include rail wheels and stabilizing outriggers.

Language was moved from a previous subsection to include "the make and model of the body equipped on the vehicle, if applicable" in subsection (3) as it is one of the components of a vehicle's configuration.

24. In section 2013.1(d)(2), new subsection (B) was added to require fleet owners to submit documentation from two or more manufacturers that offer ZEV or NZEV chassis or complete ZEVs or NZEVs that states the manufacturer does not offer for sale ZEV or NZEV chassis or complete ZEVs or NZEVs of the needed configuration. This was added as a first step to ensure the ZEV or NZEV is not available for purchase by requiring the fleet owner to communicate their need for the vehicle configuration to an existing ZEV or NZEV manufacturer. Two or more manufacturers is necessary to specify to ensure there is some competition in the nascent ZEV market. The language "if there are no manufacturers offering ZEV or NZEV chassis, the statements can come from other vehicle manufacturers" was added to provide an avenue for fleet owners to communicate their needs to existing ICE vehicle

manufacturers. This was added to help facilitate the transition to ZEV or NZEV for some of the smaller, niche markets that may need more time to develop.

25. In section 2013.1(d)(2), new subsection (C) was added to specify the Executive Officer's process used to determine whether the ICE vehicle of the needed configuration is available as a ZEV or NZEV. The language "after receiving a complete submission" is necessary to consider the possibility of a fleet owner applying with incomplete or missing information as described in subsections (A) and (B). Language was added to list the many sources of information the Executive Officer will rely on in making their determination. Information would be gathered from fleet owners or manufacturers, including information gathered to comply with other CARB-administered programs, manufacturer websites, manufacturer documentation, and from authorized dealers, as well as CARB-issued Executive Orders. This addition is necessary for transparency as the Executive Officer is to rely on sources external to information submitted by fleet owners to ensure the availability status of a vehicle configuration.

Language was added to inform a fleet owner that the Executive Officer will use their good engineering and business judgement to determine whether the configuration is available for purchase as a ZEV or NZEV from any manufacturer. It is necessary to allow the Executive Officer and their good engineering and business judgement to assess the availability of a vehicle configuration because CARB needs to analyze submitted information and data to determine whether the exemption criteria have been met and that the data provided is applicable to the vehicle configuration and weight class for which the exemption is being sought. Furthermore, in making this determination, engineering judgement will be applied to determine whether the identified body submitted in subsection (A)(3) or a body from another manufacturer can be installed on the offered ZEV or NZEV and perform the same primary intended function. This is necessary to ensure whether the vehicle configuration is available by verifying that an available ZEV chassis can or cannot be upfitted with the needed body.

An additional public process was identified to allow the Executive Officer to solicit feedback from vehicle manufacturers and authorized dealers regarding the information submitted by the fleet owner on the CARB Advanced Clean Fleets webpage. The public process is modeled from many of CARB's existing ZE fleet rules such as the Airport Shuttle Bus Regulation. A public process provides transparency, and a decision-making process that should result in a broader audience therefore more opportunities to build the niche markets needed for a full transition to ZEVs. Finally, the website URL was provided to direct a fleet owner to where the solicitations would be published and for completeness.

26. In section 2013.1(d)(2), new subsection (D) was added to specify the criteria used by the Executive Officer in determining whether a ZEV or NZEV is available to purchase. This was added in response to stakeholder concerns that it was missing from the original proposal. All the criteria in subsection (1) through (5) are required to be met before the Executive Officer will consider a ZEV or NZEV available.

New subsection (1) was added to specify that the manufacturer must certify the ZEV's powertrain with CARB in accordance with the "California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains," (ZEP certification) as adopted June 27, 2019. Staff expects nearly all manufacturers to meet the ZEP Certification requirements by the 2024 model year as this is necessary to earn credits in the ACT regulation and to enroll in CARB programs such as HVIP. New startup or niche manufacturers may not meet the ZEP certification requirements if they are classified as small manufacturers not regulated in the ACT regulation. This change was made in response to stakeholder concerns and provides assurance that manufacturers will produce ZEVs that meet minimum reliability requirements and make key information available to fleet owners.

New subsection (2) was added to specify that a ZEV or NZEV must have a model year 18 months or less from the date the fleet owner submitted the complete exemption request. This change is necessary to ensure timely delivery and deployment of a purchased ZEV or NZEV in the fleet.

New subsection (3) was added to specify that ZEV or NZEV configurations not solely for demonstration, test, or experimental purposes are considered available for purchase. This was added in response to stakeholder concerns and because it is unreasonable to deem these vehicles as available for purchase.

New subsection (4) was added to specify criteria that ZEVs or NZEVs offered as a temporary reservation but is not currently available to order are not considered available for purchase. This was added to consider the possibility that a prospective new vehicle in the concept stage may not actually be available for purchase. This addition is also necessary to ensure a legitimate order for the ZEV or NZEV is established and to ensure timely delivery and deployment of the purchased ZEV or NZEV in the fleet.

Subsection (5) was modified from the original proposal to include the qualifying language "ZEVs or NZEVs that do not conflict with safety standards that the fleet owner is subject to, if applicable" to contextualize the safety standard criteria that was moved to this section. This is also necessary to ensure that it is the fleet owner who is subject to the safety standards for operating the vehicle, rather than the safety standards that the body outfitter might be subject to when outfitting the vehicle at the manufacturing facility. Further clarifying language was added to let a fleet owner know they must submit what safety laws or standards that would be in conflict and for what reasons.

27. In section 2013.1(d)(2), new subsection (E) was added to establish the process that the Executive Officer will use to make their determination as to whether a fleet owner's application is to be approved. Language was added to clarify that the Executive Officer will be comparing vehicle configurations within the same or next higher weight class, except for Class 8 vehicles which would only be compared to the same class as Class 8 is the highest weight class. This language was added to establish that the determination is made for an equivalent weight vehicle class. Language was added to let a fleet owner know that the exemption will otherwise be

approved if the Executive Officer determines that the criteria specified in sections 2013.1(d)(2)(C) through (G) are met. The Executive Officer will rely on the information specified in sections 2013.1(d)(2)(A) through (G) and their good engineering and business judgement to make this determination. It is necessary to allow the Executive Officer and their good engineering and business judgement to assess applications because CARB needs to analyze submitted information and data to determine whether the exemption criteria have been met and that the data provided is applicable to the vehicle configuration and weight class for which the exemption is being sought.

Language was added to let the fleet owners know the process if the Executive Officer denies the exemption, which includes supplying the applicant with the name(s) of the manufacturer(s) or authorized dealer(s) that offered a ZEV or NZEV in the needed vehicle configuration and removing the respective vehicle configuration from the ZEV Purchase Exemption List. This language was added to establish a process when the Executive Officer adds a vehicle to the ZEV Purchase Exemption List upon approval of an exemption application.

28. In section 2013.1(d)(2), new subsection (F) was added to establish that the vehicle configuration will be added to the ZEV Purchase Exemption List if the Executive Officer cannot identify any manufacturer that offers a ZEV or NZEV chassis or complete ZEV or NZEV for sale in the needed configuration and weight class. It is necessary to provide a pathway by which the Executive Officer can use information from the fleet-specific exemption process to add vehicle configurations to the ZEV Purchase Exemption List to allow other fleet owners to purchase a new ICE vehicle of the same configuration and weight class without submitting an exemption request.
29. In section 2013.1(d)(2), new subsection (G) was added to establish that if the Executive Officer determines that a vehicle configuration listed on the ZEV Purchase Exemption List no longer meets the criteria specified in section 2013.1(d)(2)(C), the Executive Officer will notify the public of the determination by posting the vehicle configuration, weight class, and exemption expiration date on and after which the vehicle will no longer be eligible to purchase as an ICE vehicle from the ZEV Purchase Exemption List, which shall be the first day of the month after 180 calendar days after posting the determination on the Advanced Clean Fleets website. This addition is necessary to establish the process in which an exemption for a vehicle configuration is considered expired on the ZEV Purchase Exemption List. The 180-calendar day timeframe is necessary to ensure the availability of the vehicle configuration before removal from the list in the event a manufacturer rescinds an offer or other unanticipated circumstances occur that cause the vehicle configuration to no longer be available. Publicly posting the information allows the public to have sufficient time to plan for the expiration of the configuration exemption.

Language was added specifying the Executive Officer will rely on information gathered from fleet owners or manufacturers, including information gathered to comply with other CARB-administered programs, manufacturer websites, manufacturer documentation, authorized dealers, CARB-issued Executive Orders,

and their good engineering and business judgement in making this determination. This addition is necessary to specify the information to be used in determining the availability of a vehicle configuration. It is necessary to derive this information from a multitude of sources to ensure accuracy of the ZEV Purchase Exemption List. It is also necessary to allow the Executive Officer and their good engineering and business judgement to make these determinations because CARB needs to analyze the given information to determine the availability status of a vehicle configuration.

30. In section 2013.1(d)(2), new subsection (H) was added to provide 45 calendar days from the date a complete application is received for the Executive Officer to notify the fleet owner by email whether the exemption has been approved. If the Executive Officer does not respond to within this timeframe, the exemption will be deemed approved. This addition is necessary to ensure sufficient response time for manufacturers or authorized dealers and review time of the complete application by the Executive Officer. It is also necessary as it provides a timeframe in which a fleet owner can expect a response for their exemption request.
31. Section 2013.1(d)(2)(I) contains modified language from the section previously numbered as 2013.1(d)(2). Clarifying language was added to specify that only fleet owners whose exemption request has been granted must comply with the reporting and recordkeeping requirements.
32. In section 2013.1(e), language added to reference fleet owners may request the exemption as specified in prior sections of the regulation, because those sections have specific criteria fleet owners must meet to qualify to use the exemption, and was necessary to include so fleet owners are made aware of all criteria that must be met to request the exemption. Language was modified and moved here from previously numbered section 2013(m)(5) to establish that the total number of new ICE vehicles allowed to be purchased under this exemption must not exceed 25 percent of the total number of vehicles in the fleet owner's California fleet in the calendar year the exemption is approved less the number of ICE vehicles already in the fleet purchased pursuant to a granted exemption. This change was made to coincide with the modified thresholds in which fleet owners must meet to qualify for the exemption. It is necessary to limit the amount of ICE vehicles purchased for reasons described in the ISOR. The new addition to this limitation includes specificity about how to calculate the number of vehicles that the 25 percent cap applies to, by counting the total number of vehicles in the California fleet in the calendar year the exemption is approved, less the number of ICE vehicles in the fleet already purchased under granted exemptions. This change is necessary to specify how a fleet owner must make this calculation. Subtracting the number of ICE vehicles already purchased pursuant to granted exemptions from this total is necessary because the point of the provision is to allow a fleet owner flexibility to respond to mutual aid emergencies with up to a quarter of the fleet; if a proportion of the fleet is already composed of ICE vehicles, the exemption would not be needed for that proportion, as they are already able to respond to mutual aid emergencies. This also closes a loophole by which fleet owners could use multiple exemptions to expand their mutual aid ICE vehicle counts beyond the 25 percent cap specified. Language

was added to modify the thresholds to qualify for the Mutual Aid Assistance exemption to state the fleet must be comprised of ZEVs in the following proportions: at least 25 until January 1, 2032, 50 percent until January 1, 2035, and 75 percent thereafter. This change is necessary to meet Board direction to improve access to the Mutual Aid Assistance Exemption by significantly decreasing the thresholds to qualify for this exemption. With these modifications, fleets will only need to electrify a quarter of their vehicles to gain access versus three quarters in the previous language. In addition, language was removed requiring vehicles using the Mutual Aid Assistance Exemption to have a GVWR above 14,000 lb. This change is necessary to meet Board direction to streamline criteria for the regulation's flexibilities by allowing Class 2b-3 vehicles to qualify for this exemption. Language was added to specify which information the Executive Officer would rely upon, and which criteria the Executive Officer would determine are met by the submitted information. This change is necessary to specify which information would be used to establish which criteria and to improve readability of the regulation. Language was modified to change "commercially available" to "available to purchase" to conform with similar grammatical changes throughout the regulation for this phrase.

33. In section 2013.1(e)(2), language regarding a signed statement or email from each authorized installer of the needed vehicle body stating that it cannot be configured on the chassis without violating safety laws or standards was removed, as this language was erroneously included in the original proposal and was meant to belong with the ZEV Purchase Exemption, as originally proposed. Language regarding a signed statement of email from the vehicle manufacturer stating the chassis is not compatible with the applicable configuration was removed for the same reason. Additionally, language referring to submitting documentation from the manufacturer and mobile fueling providers with compatible mobile fueling options was modified and moved to renumbered subsection (3). Language was added specifying that fleet owners must submit documentation from each manufacturer offering ZEVs for sale of the same configuration and weight class as the ICE vehicle submitted describing the charging or refueling connector and charging or fueling time capability from each manufacturer offering ZEVs for sale. This change is necessary to determine the mobile fueling compatibility and the manufacturers providing the compatible mobile fueling option necessary for the criteria described in subsection (3). It is necessary to require documentation from each manufacturer to ensure the fleet owner is doing due diligence to find ZEVs that can fit their operational needs.
34. In renumbered section 2013.1(e)(3), language was added to require a fleet owner to submit documentation from three mobile ZEV fueling providers, with mobile fueling options that are compatible with the ZEV's charging or hydrogen fueling connector, and system identified in (2). Language was added to allow a fleet owner to submit documentation from all mobile ZEV fueling providers that have compatible mobile fueling options if the fleet owner discovers that there are less than three mobile fueling providers available that have compatible mobile ZEV fueling options for the ZEV identified in (2). This change is necessary to limit the number of mobile fueling providers fleet owners must reach out to, to reduce the burden of this process.

35. In section 2013.1(e), subsections (3) and (4) were renumbered to subsections (4) and (5), respectively.

(C) Section 2013.2

1. In section 2013.2(a), language was added to specify that the method of reporting includes both a reporting site with the link provided and that exemptions or extensions requiring documentation must be submitted to a specific email address, which is also provided.
2. In section 2013.2(b), language was updated to clarify that fleet owners must include all the information specified in section 2013.2 in their compliance report due every year by February 1 and reported information must represent the California fleet's composition as of January 1 of the corresponding calendar year. Language was also added to state that the reporting deadline did not apply changes to an existing fleet as specified in 2013.2(e). Language was also added specifying the annual reporting period is during the month of March. This addition is necessary to provide fleet owners clarity for when they are able to complete their annual reporting requirement.
3. In new section 2013.2(c)(1)(I), new language was added requiring fleets to report whether they are permanently opting into the ZEV Milestones option. This language is necessary in order for staff to determine which compliance option the fleet plans on using to be able to enforce the regulation.
4. In new section 2013.2(c)(2)(L), language was added requiring state and local government fleets to report the engine family and engine model for any new engines to the California added after 2024. The requirement to report this information for all vehicles added to the California fleet after January 1, 2024 is necessary for staff to implement the newly added requirement that ICE vehicles added to the California fleet after January 1, 2024 be California certified, and the engine family would enable staff to verify this requirement.
5. In new section 2013.2(c)(2)(N), language was added requiring fleet owners that are replacing a vehicle pursuant to the ZEV Purchase Exemption to identify which vehicle is being replaced pursuant to the minimum useful life limitations. This change is necessary because it will clearly have fleet owners identify which vehicle is claiming the exemption in order to demonstrate compliance with the regulation.
6. In section 2013.2(e), language was added to specify that the reporting requirement when adding or removing vehicles only applies to vehicles part of the California fleet. This change is necessary to prevent reporting for vehicles added or removed to the fleet outside of the California fleet.
7. In section 2013.2(f)(1), language was added to provide a date of January 1 of the current calendar year for odometer reading reporting requirements. This change is necessary to specify an exact date the odometer readings are due to prevent more than one reasonable and logical interpretation of the reporting deadline.

8. In section 2013.2(f)(2), language was added to address odometer failure and specify the process of reporting when the vehicle's originally equipped odometer has failed and is replaced. This change is necessary to accommodate circumstances in which an odometer fails and to provide subsequent reporting procedures to remain in compliance.
9. In section 2013.2(f)(2)(A), language was modified to clarify that the fleet owner must equip the vehicle with a hubodometer if the originally equipped odometer has failed and is not being replaced. The fleet owner must report the hubodometer's serial number within 30 calendar days of the date it was installed. This change is necessary to clarify that it is a requirement for a hubodometer to be installed in the event that the vehicle's original odometer fails and is not replaced. This is necessary for CARB to implement and enforce mileage-based requirements in the event an original odometer fails and is not replaced. It is also necessary that the failed odometer be reported within 30 calendar days as it provides a reasonable timeframe for a fleet owner to report any changes that might affect compliance.
10. In section 2013.2(f)(3), language was modified to state more clearly that fleet owners must report the number of miles travelled in support of an emergency for backup vehicles used in emergency operations that would exceed the backup vehicle mileage limit. This change is necessary to prevent more than one reasonable and logical interpretation of the criteria.
11. In section 2013.2(g), the title of the section was renamed from "ZEV Unavailability" to "ZEV Purchase Exemption" to clarify the purpose of the exemption. In addition, language was added to specify that fleet owners must submit the purchase agreement and photographs specified in following subsections of the ICE vehicle purchased pursuant to the ZEV Purchase Exemptions within 30 calendar days of receiving the new ICE vehicle. Language was also modified to reflect the updated name of the ZEV Purchase Exemptions. This change is necessary as it provides a reasonable timeframe for a fleet owner to report any changes that might affect compliance.
12. In section 2013.2(i), language was streamlined to reflect "any exemption or extension requests that are required to be submitted to TRUCRS@arb.ca.gov" as opposed to listing all the applicable sections in the regulation. In addition, the approval process period was updated from 30 days to 45 days from receipt of a complete submission to ensure optimal evaluation of the submission. This change is also necessary to be consistent with the ZEV Purchase Exemption.
13. In section 2013.2, a new subsection (j) was added to provide a pathway by which fleet owners that report late may demonstrate compliance. It also establishes the time frame during which this may be done, the reporting requirements, and how supporting documentation may be submitted. Lastly, it specifies under what circumstances penalties may be applied and where in the regulation additional information about the penalties is located. This addition is necessary to provide flexibility to fleet owners that become aware of the regulation after the initial implementation period to report for a desired compliance pathway.

14. In section 2013.2, new subsection (k) was added to establish the reporting process fleet owners must follow to exclude intermittent snow removal vehicles from the ZEV Milestones Calculation and the vehicle count for each Milestone Group under the ZEV Milestones Option. This change is necessary because it will clearly have fleet owners identify which vehicle is claiming the exclusion in order to demonstrate compliance with the regulation. This language includes the Executive Officer's reliance on the information and photos submitted by the fleet owner and their engineering judgement to determine whether a vehicle meets the definition of an intermittent snow removal vehicle specified in section 2013(b) and will notify the fleet owner via email within 45 days of receiving a request whether the request is approved and will immediately designate the requested vehicle as an intermittent snow removal vehicle.
15. In section 2013.2(k), new subsections (1-5) were added to describe the photographs that are required to be submitted by the fleet owner. This change is necessary as the photographs capture a complete picture of the vehicle for staff to audit and to ensure it is an intermittent snow removal vehicle as defined.

(D) Section 2013.3

1. In section 2013.3, language was added stating that fleet owners must retain records for 5 years from the date the information is used to demonstrate compliance and must provide those records upon a written or verbal request within 72 hours. This change is necessary to make clear the record retention period and that requests may be verbal or in writing in the section that initially addresses recordkeeping requirements. The change from a record retention period of 8 years to 5 years is necessary to reduce the burden of recordkeeping on fleet owners.
2. In section 2013.3(a)(3)(A), the term "mileage" was replaced with "odometer." This change was necessary to specify the method of acquiring the information to be provided to CARB is the odometer reading and not the mileage accrued and for clarity and to match changes made elsewhere in the regulation language.
3. In section 2013.3(a)(4), language was removed requiring documentation of contract with local, state, federal, or other emergency management agency, because not all vehicles performing emergency operations are contracted with government agencies, and this would have erroneously required documents that dispatched vehicles may not have.
4. In section 2013.3(c), language was modified to require that odometer documentation must include an odometer reading from the vehicle for which the records are kept. This requirement is necessary to ensure that the listed documents have a reading for CARB staff to audit, and improves the enforceability of the regulation. Language was also modified to specify that Basic (previously Biennial) Inspection of Terminals inspection documentation is a form, rather than a record, which was an erroneous inclusion in the original proposal. Staff added "previously Biennial" for clarification and to reduce confusion as California Highway Patrol

updated the term in 2016. Reference to fuel tax records was removed because these documents may not have odometer readings and would not be useful in an audit. Language was added to include California Highway Patrol (CHP) Truck and/or Tractor Maintenance and Safety Inspections form as an acceptable and auditable odometer reading document, as trucks often are subject to inspection by the CHP and these forms have an odometer reading, providing a reliable third party verification of the odometer. Language about maintenance records was modified to specify that they would be maintenance or service work orders, invoices, or receipts, and language was added to allow for driver logs or inspection sheets, as these documents typically have a recorded odometer reading, and driver logs can be used to verify readings on these documents.

5. In section 2013.3(d), language was added which state that fleet owners must provide documentation as specified in section 2013.1(c) to CARB that supports the fleet owners' request and qualification for the extension. References to purchase agreements was also removed to conform with changes made to the extension. This change was necessary to clarify the scope of records that must be kept to only the required documents that must be submitted to CARB under section 2013.1(c) as well as remove references to documents not referenced by the infrastructure delay extension.
6. In section 2013.3(e), language was modified to state that fleet owners must provide documentation as specified in section 2013.2(g), ZEV Purchase Exemption Supporting Documentation Reporting, as well as section 2013.1(d), ZEV Purchase Exemptions, to CARB. This change was necessary to clarify the scope of records that must be kept to only the required documents that must be submitted to CARB under section 2013.2(g) as well as section 2013.1(d).
7. In section 2013.3(f), language was added which state that fleet owners must provide documentation as specified in section 2013.1(e), Mutual Aid Assistance, to CARB that supports the fleet owners' request and qualification for the extension. References to public bids and requests for information was also removed to conform with changes to the Mutual Aid Assistance exemption. This change was necessary to clarify the scope of records that must be kept to only the required documents that must be submitted to CARB under section 2013.1(e) as well as remove references to documents no longer required by the Mutual Aid exemption.
8. In section 2013.3(h), language was added which state that fleet owners must provide documentation as specified in 2013.1(b), Daily Usage Exemption, to CARB that supports the fleet owners' request and qualification for the extension. This change was necessary to clarify the scope of records that must be kept to only the required documents that must be submitted to CARB under section 2013.1(b).
9. In section 2013.3, a new subsection (i) was added which states that fleet owners must keep and provide copies of the vehicle specification sheet from the manufacturer and photograph as specified in section 2013.2(k), Intermittent Snow Removal Vehicle Reporting, to CARB. This additional section was necessary to support the new

exemption and clarify the scope of records that must be kept to only the required documents submitted to CARB under section 2013.2(k).

10. In section 2013.3, a new subsection (j) was added which states that fleet owners must keep and provide copies written sales disclosures as specified in section 2013(r), Sales Disclosure of Regulation Applicability, to CARB. This additional section was necessary to clarify the scope of records that must be kept to only the required documents under section 2013(r) and to conform with the addition of this requirement to the regulation.
11. In section 2013.3, a new subsection (k) was added, and record retention language was removed as it is now addressed in section 2013.3. New language was added to this section to address the records required for the newly added Non-repairable Vehicle exemption. These records include: police report, insurance statement, signed attestation, photographs, and information submitted to CARB as specified in section 2013(n)(7). These additions are necessary to support the new exemption and clarify the scope of records required.

(E) Section 2013.4

1. In section 2013.4(b), subsections 2013.4(b)(1) was added that defines reduced late reporting penalties beginning January 1, 2025, and until January 1, 2027. Until January 1, 2027, fleets that fail to report required information would be penalized once for each vehicle each month information is not submitted past the initial reporting period specified in section 2013.1(b). This additional subsection is necessary to conform with changes made allowing for late reporting to define the late reporting penalty of the proposed ACF regulation as well as incentivize on-time reporting as the proposed regulation matures. Assessing penalties on a per vehicle per month basis is necessary to provide some leniency for fleets in recognition there should be some consideration that outreach efforts are not perfect and may not reach every possible regulated party and the Health and Safety code allow for violations to be assessed on a per vehicle per day basis. Fleet owners would still be held to the same compliance requirements and penalties if failing to meet other compliance requirements.
2. In section 2013.4, a new subsection (d) was added to group similar language about enforcement criteria together and to conform with changes to the "fleet owner" definition. The change was necessary to improve readability of the regulation. The language remains the same as originally proposed and the rationale for the inclusion of this specific language is available in the Advanced Clean Fleets Initial Statement of Reasons.

B. Drayage Fleet Requirements

The following numbered list provides the purpose and rationale for staff's proposed changes to the draft regulation order provided as Appendix A-3.

(A) Section 2014

1. In section 2014(a), staff added "that operate in California" to clarify that the regulation applies to the listed regulated entities only if they operate in California. Staff also removed redundant language without changing the intent and meaning of this provision.
2. In section 2014(b) the definition of "authorized dealer" was modified to specify that the term means entities that are both authorized by a manufacturer and in fact capable of performing repairs on vehicles. This modification was necessary because the previous language did not reference who would authorize the dealer and was not specific about the type of repairs of which the dealer is capable.
3. In section 2014(b), in the definition of "Beneficial cargo owner", staff added the term "entity" to clarify that a beneficial cargo owner may be an "entity" or a person.
4. In section 2014(b), in the definition of "Broker", staff replaced the term "motor carrier" with "drayage motor carrier" to add specificity without changing the meaning of this definition.
5. In section 2014(b), in the definition of "CARB Online System", staff added the specific website for reporting and phrase "of drayage trucks" to clarify that entities with common ownership and control are required to report only if they have control over drayage trucks.
6. In section 2014(b), staff added a definition for "Weight class", and incorporated the definitions of "Class 7" and "Class 8" into the "Weight class" definition. The definitions for weight class and descriptions of Class 7 and Class 8 were previously in different sections of the regulation. These closely related terms were consolidated under a single definition to prevent confusion and improve readability.
7. In section 2014(b), the definition of "Common ownership and control" was modified to replace "represent the same company are under common ownership and control" with "whose services are under day-to-day control of the hiring entity are under common ownership or control", to clarify the applicability of definition to specific business models.
8. In section 2014(b), staff added a definition for "Concrete mixer" to add clarity to the vehicle types included in the definition of "Dedicated use vehicles".
9. In section 2014(b), the definition of "Controlling party" was modified to specify that the term is applicable to managing day-to-day operations of drayage trucks, rather than fleets, because the definition of common ownership or control on which the controlling party definition is based applies to individual vehicles rather than fleets. "Drayage truck" was used instead of the general term "vehicle" for specificity. Overall, this change is necessary for consistency and to prevent more than one reasonable and logical interpretation of the criteria.

10. In section 2014(b), the definition of "Declared emergency event" was modified to include any degree or condition of emergency specified in the California Government Code section 8558. This change was necessary because the code section referenced includes both conditions and degrees of emergency, and leaving out the degrees of emergency would unintentionally narrow the requirements.
11. In section 2014(b), staff added a definition for "Dedicated auto transport" to add clarity to the vehicle types included in the definition of "Dedicated use vehicles".
12. In section 2014(b), staff added a definition for "Dedicated fuel delivery vehicle" to add clarity to the vehicle types included in the definition of "Dedicated use vehicles".
13. In section 2014(b), in the definition of "Dedicated Use Vehicles", staff removed language that was redundant with the newly added definition of "Power take-off units", without changing the intent and meaning of this provision. Staff also replaced the term "Dedicated power take-off vehicles" with "Vehicles that need power take-off units to operate" to better align with the "Power take-off units" definition.
14. In section 2014(b), in the definition of "Drayage motor carrier", staff added the term "California" to clarify that this definition is only applicable if the drayage motor carrier contracts with entities that pick-up and delivers goods or visit seaports and intermodal railyards in California.
15. In section 2014(b), staff replaced the defined term of "Government Agency" with "Governmental Agency" to align with the terminology used in the definition of "Common ownership and control" and "Responsible official".
16. In section 2014(b), in the definition of "Heavy-Duty," staff replaced "gross vehicle weight rating" with "GVWR" to remain consistent and because this acronym was previously defined and used in the document.
17. In section 2014(b), staff added a definition for "Internal combustion engine" to provide a description of the types of repower engines that are not allowed to extend the minimal useful life of the vehicle as described in section 2014.1(a)(8)(G).
18. In section 2014(b), staff modified the definition of "Legacy drayage truck" to accurately reflect the December 31, 2023 deadline for non-zero-emission drayage trucks to register in the CARB Online System. This change aligns this definition with the registration requirements described in section 2014.1.
19. In section 2014(b), staff added a definition for "Manufacturer" to define any entity or person that manufactures or assembles vehicles prior to the first purchase of the vehicle other than for resale. This definition adds clarity to the applicability of entities that truck purchasers may enter into contract with to be eligible for an extension.
20. In section 2014(b), staff modified the defined term from "Military tactical support vehicle" to "Military tactical vehicle", to be consistent with California Code of Regulations (CCR), section 1905.

21. In section 2014(b), staff added a definition for “Minimum useful life” to more clearly define the minimum useful life threshold previously described in section 2014.1(a)(1)(C). Redundant language was removed from section 2014.1(a)(1)(C) and placed in the “Minimum useful life” definition. Staff added language in subsection (C) of the “Minimum useful life” definition to specify if the vehicle no longer has its originally equipped engine, or the model year of the originally equipped engine is not able to be determined, the model year of the vehicle less one year must be used to determine when the thresholds described in subsections (A) and (B) above are met. This is necessary to ensure that the minimum useful life can be determined by CARB staff when assessing compliance, even when vehicles are purchased without their original engine, or when the original engine year cannot be determined. The approach of using the vehicle model year less one year is consistent with common industry practice of installing engines with a model year one year prior to the model year of the vehicle it is placed in.
22. In section 2014(b), staff added a definition for “Mobile crane” to add clarity to the vehicle types included in the definition of “Dedicated use vehicles”.
23. In section 2014(b), the definition of “model year” was modified to mean the production period as assigned by the manufacturer when certifying an engine or vehicle for sale, pursuant to title 17, CCR section 95662(a)(16). This change was necessary as the language previously pointed only to a California Code of Regulations section that describes the process by which manufacturers must select a model year for a production vehicle. This level of specificity is not necessary for this regulation as the fleet owner is not involved in determining the vehicle model year, so the definition has been modified to refer in plain language to the model year that has been assigned by the manufacturer, rather than just pointing to the procedure by which manufacturers must chose the model year. Manufacturers set the model year when certifying engines or vehicles for sale, so this definition was selected to mirror this fact.
24. In section 2014(b), staff added the definition of “Motor vehicle”, to add clarity and be consistent with the terminology utilized in California Vehicle Code Section 415.
25. In section 2014(b), in the definition of “Notice to proceed”, staff replaced the term “powertrain conversion installer” with “entity that converts vehicles to zero-emission vehicles.” This change was necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.
26. In section 2014(b), staff added a definition for “Power take-off unit” to add clarity to the vehicle types included in the definition of “Dedicated use vehicles”.
27. In section 2014(b), staff added definitions for “SAE J1667” and “Smoke opacity test” to define the technical requirements and process for producing the smoke opacity test documentation that can be used to meet the requirement of section 2014.1(a)(4)(B)(3).

28. In section 2014(b), in the definition of "Seaport", staff removed the term "typically", to clarify that properties where marine and seaport terminals are located are always considered seaports.
29. In section 2014(b), in the "vehicle purchase" definition, staff replaced the term "powertrain conversion installer" and added clarification of the requirements and contract terms. These changes are necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation. Staff also modified the definition to specify that the term refers to an action the fleet owner is taking, and that "placing an order" is specifically referring to an order "to acquire the legal or equitable title to a vehicle", because other orders for vehicles are possible, including parts orders. These changes are necessary to prevent more than one reasonable and logical interpretation of the criteria.
30. In section 2014(b), the definition of "Zero-emission powertrain" was corrected to reference "title 13, CCR section 1956.8(j)(27)" instead of "title 13, CCR section 1956.8(i)(12)".
31. In section 2014(b), the definition of "Zero-emission vehicle" was modified to reference the "powertrain" as the component of the vehicle that produces emissions, rather than the "drivetrain".
32. In section 2014(b), the definition of "Zero-emission vehicle fueling infrastructure" was added, to more clearly define the type of equipment whose procurement and construction is applicable for compliance extension requests under section 2014.2(b).
33. In section 2014(c), references to sections 2014.1, 2014.2, and 2014.3 were added to the list of sections the listed exemptions apply to. These changes clarify that in addition to the applicability determination identified in section 2014(a), exempted vehicles listed in section 2014(c) are also exempt from all requirements listed in sections 2014.1, 2014.2, and 2014.3 of the regulation.
34. In section 2014(c)(3), staff replaced "Military tactical support vehicle" with "Military tactical vehicle", to be consistent with CCR, section 1905.
35. In section 2014(c)(5), staff added language to clarify that this section applies to "legacy drayage trucks" as defined in section 2014(b) rather than applying to all "heavy duty vehicles". Staff deleted the phrase "shall be exempt from the requirements of this regulation", as it was redundant with text in the header of section 2014(c).
36. In section 2014(c)(5), staff added language for all dispatch records and contracts verifying legacy truck activities were for the purpose of supporting emergency operations during the declared emergency to be retained for "for 5 years from when the emergency event was declared". The addition of this requirement allows for CARB and other California officials to conduct compliance checks on claimed emergency operation activities.

(B) Section 2014.1

1. In section 2014.1(a)(1)(A), staff deleted the phrase “for the first time” to avoid confusion. Non-zero-emission drayage trucks may only register in the CARB Online System prior to January 1, 2024 and may not be registered multiple times. These vehicles cannot be “re-registered”, as described in section 2014.1(a)(8)(F).
2. In section 2014.1(a)(1)(A), staff removed language that was duplicative of the definition of a zero-emission vehicle in section 2014(b), to improve readability.
3. In section 2014.1(a)(1)(B), staff replaced the term “regulated” with “California”, to clarify that this requirement applies only to California seaports and intermodal railyards. Referring to “regulated” seaports and intermodal railyards lacks specificity and may be misinterpreted to include seaports and intermodal railyards outside of California.
4. In section 2014.1(a)(1)(B), the term “excluded” was changed to “removed”, and additional redundant language was deleted to avoid confusion and improve readability.

In section 2014.1(a)(1)(B), the initial compliance date for the requirements in this section was changed from “2025” to “March 31, 2025” to add clarity.

5. In section 2014.1(a)(1)(C), staff replaced the term “regulated” with “California” to clarify that this requirement applies only to California seaports and intermodal railyards. Referring to “regulated” seaports and intermodal railyards lacks specificity and may be misinterpreted to include seaports and intermodal railyards outside of California.
6. In section 2014.1(a)(1)(C), staff deleted text that is redundant with the newly added definition of “Minimum useful life”, and added language stating that “Any legacy drayage truck that exceeds its minimum useful life threshold” would be removed from the CARB Online System and no longer be able to conduct drayage services in California. These changes add clarity by more clearly describing the process by which a legacy drayage truck will be removed from the CARB online system.
7. In section 2014.1(a)(2)(A), staff added the phrase “in the CARB Online System” to specify which subset of drayage trucks this section is referencing. Staff deleted “equipped with and operate a” and “powertrain” to eliminate language that is redundant with the definition of zero-emission vehicle. Staff also added the language “vehicles and only zero-emission drayage trucks can provide drayage service in California” to add clarity and prevent confusion.
8. Staff added section 2014.1(a)(3), to require any person selling vehicles subject to the regulation to provide a disclosure of the regulation applicability warning the potential buyer the vehicle may be subject to CARB requirements. This provides protection to buyers that may not be aware of the regulation from purchasing a vehicle that may need to be replaced sooner than expected. This language is necessary as it supplies a reasonable warning to a purchaser and a website where

more information can be found about this and other CARB regulations. The requirement is also necessary to improve the enforceability of the regulation, as it would ensure buyers are aware of potential requirements for the vehicle they would purchase.

This provision also requires the seller of the vehicle to keep a copy of the written disclosure for at least five years and that they provide copies of the disclosure to CARB staff or the CARB Executive Officer within 72 hours of a written or verbal request. These requirements assist with CARB compliance and enforcement activities.

9. In renumbered section 2014.1(a)(4)(A), staff added “detailed in section 2014.1(a)(8)(C)” to clarify which registration information was being referenced, and deleted language for the option to submit hardcopy information to a physical address.
10. In renumbered section 2014.1(a)(4)(B), staff replaced the term “odometer mileage” with “odometer reading” to clarify that the actual odometer reading is required as opposed to the mileage accrued for the year. This distinction was consistently updated throughout the document for clarification.

In renumbered section 2014.1(a)(4)(B), staff also specified that the “engine family” and “engine model” year will be collected for legacy drayage trucks that are 12 years or older. This information was previously listed in the document but was added here to consolidate the request for items needed in this time frame. In addition, staff added “using documentation listed in section 2014.1(a)(4)(B)(3)”, to add specificity to where in the regulation text the types of required types of documentation for odometer reading verifications are listed.

11. In renumbered section 2014.1(a)(4)(B) staff added language to clarify where odometer readings should be reported and to set a specific date that the odometer readings should be reflect. This addition reduces ambiguity for the regulated parties. This change is necessary to specify an exact date that the odometer reading must be taken, to ensure that annual readings cover the period of exactly one year, and to prevent more than one reasonable and logical interpretation of the reporting deadline.
12. In the original section 2014.1(a)(4)(B)(2), the original language was deleted and incorporated into section 2014.1(a)(4)(B)(1) in an effort to reduce redundancy and to streamline the language.

In renumbered section 2014.1(a)(4)(B)(2), language was added to address odometer failure and specify the process of reporting when the vehicle’s originally equipped odometer has failed and is replaced. This change is necessary to accommodate circumstances in which an odometer fails and to provide subsequent reporting procedures to remain in compliance.

In renumbered section 2014.1(a)(4)(B)(2), staff added the word “information” to characterize what is being requested, and “date the” to signify that the 30 calendar

days is in relation to the specific date of the original odometer replacement. Staff also substituted the word "failure" with "was replaced" for consistency purposes. Odometer replacements should now be reported when the odometer is replaced as opposed to when it fails.

13. In renumbered section 2014.1(a)(4)(B)(2)(a) language was modified to clarify that the drayage truck owner must equip the vehicle with a hubodometer if the originally equipped odometer has failed and is not being replaced. The truck owner must report the hubodometer's serial number within 30 calendar days of the date it was installed. This change is necessary to clarify that it is a requirement for a hubodometer to be installed in the event that the vehicle's original odometer fails and is not replaced. This is necessary for CARB to implement and enforce mileage-based provisions and requirements in the event an original odometer fails and is not replaced. It is also necessary that the failed odometer be reported within 30 calendar days as it provides a reasonable timeframe for a fleet owner to report any changes that affect compliance requirements.
14. In renumbered section 2014.1(a)(4)(B)(3) staff added "previously Biennial" for clarification and to reduce confusion, as California Highway Patrol updated the term in 2016.
15. In renumbered section 2014.1(a)(4)(C) staff included specific language that drayage truck owners must disclose about the regulation to drayage truck operators that they hire. This clarification standardizes the information that needs to be shared with hired entities. In addition, the language was added to allow disclosures of regulation applicability to be provided either in the hiring contract or agreement or as an addendum to the agreement or contract. It is necessary to not require drayage truck owners to alter existing contract language and allow for flexibility in how the disclosure is provided, while ensuring that the disclosure is provided as part of the contractual agreement. This change was added in response to stakeholder concerns.
16. In renumbered section 2014.1(a)(4)(D), staff clarified that both owners and controlling parties are responsible for ensuring that the vehicles under their control must be compliant with this regulation. This clarification equitably expands this requirement to all owners of drayage trucks.
17. Sections 2014.1(a)(4)(C) and 2014.1(a)(4)(D) were replaced by 2014.1(a)(4)(E). This replacement more simply points drayage truck owners to where in the regulation they can find more information about extensions that they can access (section 2014.2). It also clarifies the section of the regulation (section 2014.1) that they must comply with in order to utilize these extensions.
18. In renumbered section 2014.1(a)(5)(A) staff clarified the minimum length of time of 5 years that drayage truck operators must keep records that are now explicitly referenced for clarity in sections 2014.1(a)(5)(B) and 2014.1(a)(5)(C). This section also clarifies that the CARB staff or Executive Officer will request the information or documentation. This clarification reduces any clarification about the identity of the

requestor. Staff also added “verbal” to clarify that the request may be both written and verbal.

19. In renumbered section 2014.1(a)(5)(B)(5) staff added “contact person’s email.” This provides the needed additional contact information to enable compliance and enforcement communications.
20. Staff removed section 2014.1(a)(5)(B)(8) because it was no longer needed given the addition of the hiring disclosure language added in section 2014.1(a)(4)(C). The signed contract requested in section 2014.1(a)(5)(B)(7) will now indicate that notification about the regulation was given to the hired entities. Thus, additional documentation is no longer needed.
21. In section 2014.1(a)(5)(C), staff removed the redundant words “identify and provide” as these actions were incorporated into 2014.1(a)(5)(A).
22. In section 2014.1(a)(6), staff deleted the words “drayage motor carrier and” because it is redundant with the definition of controlling party.
23. Staff replaced previous section 2014.1(a)(5)(D) and 2014.1(a)(5)(E) with specific language now in section 2014.1(a)(6)(A) that drayage truck owners must disclose about the regulation to drayage truck operators that they hire. This clarification standardizes the information that needs to be shared with hired entities. In addition, the language was added to allow disclosures of regulation applicability to be provided either in the hiring contract or agreement or as an addendum to the agreement or contract. It is necessary to not require drayage truck owners to alter existing contract language and allow for flexibility in how the disclosure is provided, while ensuring that the disclosure is provided as part of the contractual agreement. This change was added in response to stakeholder concerns.
24. Staff consolidated renumbered section 2014.1(a)(6)(F) and 2014.1(a)(6)(B) as these two sections were duplicative.
25. In renumbered section 2014.1(a)(6)(C), staff included “that acknowledge they” to clarify that the controlling parties should receive some confirmation from the drayage truck operator that they have been informed about the information they need to provide about the drayage motor carrier.

In renumbered section 2014.1(a)(6)(C), staff replaced “provide” with “maintain” for clarification. The request for drayage truck operators to “provide” drayage motor carrier information is expressed elsewhere in the regulation (2014.1(a)(5)(A), thus it is only critical for controlling parties to alert drayage truck operators that the information they provide must be maintained.
26. In renumbered section 2014.1(a)(6)(C), staff also updated where the motor carrier information is listed in the regulation.
27. In renumbered section 2014.1(a)(6)(D), staff deleted the term “an official” to reduce confusion, as the term official is undefined and is not a useful descriptor. In addition,

staff replaced the term “oral” with “verbal” to add specificity to how CARB staff or the Executive Officer will request information.

28. In renumbered section 2014.1(a)(6)(D)(1), staff removed “and time” to reduce reporting requirements that are not needed.
29. Staff replaced section s2014.1(a)(6)(G) and 2014.1(a)(6)(H) with section 2014.1(a)(6)(E). This replacement more simply points controlling parties to where in the regulation they can find more information about extensions that they can access (2014.2). It also clarifies the section of the regulation (2014.1) that they must comply with in order to utilize said extensions.
30. Staff replaced section 2014.1(a)(6)(G) and 2014.1(a)(6)(H) with 2014.1(a)(6)(E). This replacement more simply points controlling parties to where in the regulation they can find more information about extensions that they can access (2014.2). It also clarifies the section of the regulation (2014.1) that they must comply with in order to utilize these extensions.
31. In renumbered section 2014.1(a)(7)(A), staff added “All information collected in 2014.1(a)(7)(A) shall be kept for a period of not less than five years from the truck entry date and is to be made available to CARB staff or CARB Executive Officer within 72 hours of a written or verbal request” to clarify the length of time that each marine and seaport terminal and intermodal railyard must keep the information they collect for all drayage trucks that enter their facility or property.
32. In renumbered section 2014.1(a)(7)(A)(1), “and time” was removed as this information is not necessary to enforce the regulation.
33. In renumbered section 2014.1(a)(7)(A)(2), “Exit date and time” was removed as this information is not necessary to enforce the regulation.
34. Renumbered section 2014.1(a)(7)(B) was included as an alternative reporting option to provide flexibility to seaport and marine terminals and intermodal railyards that do not have automatic reporting systems. This section was added to address stakeholder concerns that smaller seaports and railyards and many non-container terminals may be burdened by the reporting requirements in section 2014.1(a)(7)(A).
35. In renumbered section 2014.1(a)(7)(C), staff included “or record” and “or recorded” that the information in this section can be collected or recorded. This gives the marine and seaport terminals and intermodal railyards more options.

In section 2014.1(a)(7)(C), staff deleted the term “an official” to reduce confusion, as the term official is undefined and is not a useful descriptor.
36. In renumbered section 2014.1(a)(7)(C)(1)(c) staff added “contact person’s email” to include additional needed contact information to enable compliance and enforcement communications.
37. In renumbered section 2014.1(a)(7)(C)(2)(a) staff removed “and time” as this information was not necessary for enforcement this regulation. Staff also removed

“exit date and time” from the following section because it was also not needed to enforce this regulation.

38. In renumbered section 2014.1(a)(7)(C)(2)(c) staff added “registered owner’s email” to require additional needed contact information to enable compliance and enforcement communications.

39. In renumbered section 2014.1(a)(7)(D), staff added “to their respective seaport or railyard authorities annually” This section adds consistency to the reporting process for marine and seaport terminals and intermodal railyards. Previously, marine and seaport terminals and intermodal railyards only had to report information on non-compliant drayage trucks to their respective seaport or railyard authorities. This section ensures that information collected on all drayage trucks that visit a seaport or intermodal railyard is submitted to seaport and railyard authorities. The process described in this provision ultimately reduces confusion and provides ease through consistency.

In renumbered section 2014.1(a)(7)(D), staff changed the reporting date from February 15 to January 31. This change was made to provide seaport and railyard authorities sufficient time to collect the information from the marine and seaport terminals and intermodal railyards before having to provide that information to CARB.

In renumbered section 2014.1(a)(7)(D), staff also included “For instance, seaport terminals must report data collected for calendar year 2027 to their authorities no later than January 31 of 2028.” as an example to clarify any confusion surrounding how the timeline for reporting works.

40. In renumbered section 2014.1(a)(7)(F), staff added language to clarify that seaport and railyard authorities should report information in 2025 for drayage trucks that visit their facilities in 2024. While the terminals and railyards will start collecting this information throughout 2024, the authorities won’t have access to the information until 2025.

In renumbered section 2014.1(a)(7)(F), staff added language to establish a deadline of March 1 for seaports and intermodal railyards to submit the data they collected on drayage trucks that visit their facilities. This provides the authorities with sufficient time to gather the information they collect from the marine and seaport terminals and railyards before submission to CARB.

In renumbered section 2014.1(a)(7)(F), staff updated language “Reporting parameters are detailed on the CARB Advanced Clean Fleets website at <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>” to clarify where seaport and railyard authorities can find more information about how to report.

41. In renumbered section 2014.1(7)(G), staff updated section references to clarify which information is required to be reported under Schedule B.

42. In renumbered section 2014.1(7)(G), staff updated language "Reporting parameters are detailed on the CARB Advanced Clean Fleets website at <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-fleets>" to clarify where seaport and railyard authorities can find more information about how to report.
43. In renumbered section 2014.1(7)(G) "Schedule B", staff added a column to provide clarity on when the quarterly drayage truck entry information that is collected by marine and seaport terminals and intermodal railyards under Schedule A must be reported by seaport and railyard authorities under Schedule B.
44. In renumbered section 2014.1(7)(H), staff added "Seaport or port and railyard authorities shall ensure their respective terminals and/or intermodal railyards abide by all reporting requirements and deadlines in sections 2014.1(a)(7)(A), 2014.1(a)(7)(B) and 2014.1(a)(7)(D)" to section 2014.1(a)(7)(H). This provision directs seaport and railyard authorities to ensure that the entities utilizing their facilities adhere to the reporting requirements and deadlines for all drayage trucks that visit their facilities. This addition is necessary for compliance and is consistent with requirements associated with compliant drayage trucks.
45. In renumbered section 2014.1(a)(7)(I) staff added language "Seaport or port and railyard authorities shall ensure their respective terminals and/or intermodal railyards abide by all" schedule requirements "in 2014.1(a)(7)(C) and 2014.1(a)(7)(E)" to specify the sections where the requirements and deadlines are detailed.
46. Staff reworded renumbered section 2014.1(a)(8)(A) in order to reduce confusion and improve readability. "No later than" was replaced with "Starting" to clarify that the requirement for drayage trucks to be registered in the CARB Online System will not commence until December 31, 2023. This aligns with other drayage truck registration requirements described in section 2014.1. "Begin or continue operations" was replaced with "to operate" to improve readability.
47. In renumbered section 2014.1(a)(8)(B), staff added "owners" to clarify who has to submit reporting information. In addition, "detailed in section 2014.1(a)(8)(C)" to clarify which registration information was being referenced. Staff also deleted language for the option to submit hardcopy information to a physical address.
48. In renumbered section 2014.1(a)(8)(C), staff deleted "and doing business at a seaport or intermodal railyard" because it was redundant with the definition of drayage trucks.
49. In renumbered section 2014.1(a)(8)(C)(10), staff added that drayage truck owners must "identify whether the drayage truck is replacing a legacy drayage truck is non-repairable." It is necessary to identify replacement vehicles in the CARB Online System because these vehicles have different requirements (2014.1(a)(8)(H)) from other legacy drayage vehicles. This change is also necessary to identify which vehicle is designated to use the non-repairable vehicle extension.
50. In renumbered section 2014.1(a)(8)(C)(11), staff added that drayage truck owners must identify whether the vehicle is owned by a federal, state, or local government.

This information is important to report because these entities are subject to other requirements under ACF.

51. In renumbered section 2014.1(a)(8)(C)(16), staff added "or jurisdiction" to indicate that the license plate number may be associated with a state or jurisdiction. This clarification acknowledges that license plates can also be issued by jurisdictions.
52. In renumbered section 2014(a)(8)(C)(20), staff deleted "or was purchased to", "exemption or", and "2014(c) to reduce confusion as this reporting applies only to compliance extension requests offered in 2014. This also removes duplicate language that is covered under the exempt vehicle description in section 2014(c).
53. In renumbered section 2014(a)(8)(C)(21), staff deleted "that are 12 years or older as" because it is redundant with the information specified in the referenced section 2014.1(a)(3)(B).
54. In renumbered section 2014(a)(8)(C)(22), staff added "with a vehicle model year" to clarify that the age of legacy drayage truck is in relation to that of the vehicle as opposed to that of the engine.
55. In renumbered section 2014(a)(8)(C)(23), staff added "with a vehicle model year" to clarify that the age of legacy drayage truck is in relation to that of the vehicle as opposed to that of the engine.
56. In renumbered section 2014(a)(8)(D), staff replaced "is required" with "must" for simplification purposes.
57. In renumbered section 2014(a)(8)(G), staff clarified that "legacy" drayage trucks cannot be repowered with an internal combustion engine to extend the minimum useful life of the vehicle. Legacy drayage trucks are the only types of drayage trucks in the CARB Online System that cannot be repowered, this the clarifier of "legacy" was added to avoid confusion. In addition, staff streamlined the language in 2014.1(a)(8)(G) to reduce unnecessary verbiage and to state the provision more directly.
58. In renumbered section 2014.1(a)(8)(G)(1), staff added "drayage truck owners that convert a drayage truck to a zero-emission vehicle must report the vehicle's new fuel type within 30 calendar days of being converted". While this regulation does not allow for internal combustion engines to be repowered to extend the minimum useful life of a vehicle (section 2014.1(a)(8)(G), a drayage truck owner can convert their legacy drayage truck to a zero-emission vehicle and remain in compliance with this regulation. The added language ensures that CARB is made aware of drayage truck owners extending their compliance in a timely manner.
59. Section 2014.1(a)(8)(H) was added to include a provision by which drayage truck owners may request and obtain an extension if a vehicle is non-repairable due to an accident or other circumstance beyond the drayage truck owner's control that damages the vehicle such that it is not repairable. This would allow a drayage truck owner to purchase and add to the CARB Online System a used internal combustion

engine vehicle of the same or newer model year to replace a vehicle that is non-repairable. The used vehicle would be able to operate until the end of the minimum useful life of the original vehicle, and language was added specifying that the replacement's useful life would be based on the engine year of the original vehicle and the mileage accrued on the original vehicle plus any new mileage accrued on the replacement. The non-repairable vehicle will be removed from the CARB Online System. Drayage truck owners must report within 30 days of adding the vehicle to the CARB Online System. Drayage truck owners would be required to waive certain protections of the Health and Safety Code 43021(a) for the replacement vehicle to qualify, and would need to apply by submitting documents, photos, and information to TRUCRS@arb.ca.gov before adding the used vehicle to the CARB Online System.

This provision allows for an extension from the ZEV purchase requirement, as specified in section 2014.1(a)(1)(A), without changing the schedule the owner would be required to upgrade to a ZEV. This change maintains a level playing field and addresses an unplanned event without changing expected emissions reductions.

Requiring the same or newer model year engine is necessary to ensure the replacement vehicle is in fact a replacement and not an expansion of the number of legacy drayage trucks in the CARB Online System, and that dirtier engines are not incorporated into the CARB Online System than what was rendered non-repairable.

Requiring reporting within 30 calendar days of replacing the non-repairable vehicle is necessary to give sufficient time to report and aligns with reporting timeframes for other drayage truck owners making changes to reported information.

This section clarifies that by using this provision, the drayage truck owner must voluntarily waive the useful life of the replacement vehicle. This addition is necessary to make explicit the compromise that drayage truck owners have to make in order to utilize this provision. Waiving Health and Safety Code protections is necessary because otherwise, the used vehicle would potentially be granted a longer useful life than the original vehicle if the engine year is newer than the year of the original. This would result in additional emissions impacts and is not consistent with the purpose of the regulation to reduce emissions.

Requiring drayage trucks request and obtain extensions by submitting information to TRUCRS@arb.ca.gov before the used vehicle is added is necessary as it provides clear direction on how and when to apply and allows CARB staff to review requests and determine whether the criteria have been met.

The information required to be submitted is necessary to ensure the vehicle is non-repairable. Police reports or insurance statements are generally recognized as reliable documents that indicate whether a vehicle has been in an accident, and whether it is non-repairable. The VIN is necessary to identify the vehicle in the fleet that is being replaced and which vehicle is replacing it.

The recordkeeping and reporting requirements associated with this provision as detailed in section 2014.1(a)(8)(H)(2) are consistent with all other drayage recordkeeping and reporting requirements.

60. Staff added section 2014.1(a)(8)(I) to clarify what happens in the event that a drayage truck owner reports information in sections 2014.1(a)(8)(C)(21-23) late. This section is needed to be specific that trucks will be removed for reporting late. Furthermore, this section reduces ambiguity and avoids confusion.

(C) Section 2014.2

1. In section 2014.2, staff streamlined the language in order to more simply explain the conditions under which drayage truck owners or controlling parties can request extensions. Reducing the verbiage in this section was necessary to reduce confusion.
2. In section 2014.2(a), language was added to refer drayage truck owners or controlling parties to other sections in the regulation that explain that they can request this extension. Language was added to establish the duration of this extension, which is until an ordered ZEV is received. Additional qualifying language specifies the ZEV order must have been placed at least one year before the next applicable compliance date then the drayage truck owner or controlling party is directed to section 2014.1(a)(1)(C) to where the supporting documents are described in detail. Lastly, language was added to specify the extension is for ZEV that cannot be delivered by the next application compliance date.
3. In section 2014.2(a)(1), language was modified to provide clarification of the process and requirements to request an extension for the vehicle delivery delay. The modified language clarifies the unique types of documentation required for vehicle purchases and leases that will be utilized for extension applications. These requirements ensure that the purchase or lease agreement is binding and that it identifies that the vehicle that is delayed is a zero-emission vehicle. In addition, the agreement must include specific information to be eligible, as to being ordered at least one year prior to the end of the expected useful life of the legacy vehicle it is replacing.
4. In section 2014.2(a)(2), language was modified to expand the applicability of the delivery delay extension to vehicle leases and clarity to the application process. Reporting deadlines were updated to ensure timely reporting of purchase or lease agreement cancellations. A provision was added to allow a vehicle delivery delay extension to be renewed if a manufacturer cancels a purchase agreement and the applicant submits documentation of a new zero-emission vehicle "purchase agreement within 180 calendar days to TRUCRS@arb.ca.gov".
5. Staff added section 2014.2(a)(4) to add a requirement for responsible officials to sign extension request documents.
6. Staff added sections 2014.2(a)(5) and 2014.2(a)(6) to establish the process by which the Executive Office will review and approve or deny the extension request.

7. In renumbered section 2014.2(a)(7), language that was duplicative of the newly added sections 2014.2(a)(4), 2014.2(a)(5), and 2014.2(a)(6) was removed.
8. In renumbered section 2014.2(a)(8), language was modified to replace an incorrect reference to section 2015.2(a) with the correct reference of 2014.2(a). Additional language was added to clarify the supporting documentation submission requirements.
9. In renumbered section 2014.2(a)(9), language was modified to reduce the document retention requirements from 8 years to 5 years, to better align with CARB auditing processes. Language was also modified to add clarity to the types of requests that may be submitted to the Executive Officer.
10. In renumbered section 2014.2(b), language was modified to introduce the infrastructure delay extensions which includes construction delays and was expanded to also include site electrification delays. Language was added to refer a drayage truck owner or controlling party to other sections in the regulation that explain that explain that they can request this extension. Clarifying language, "due to circumstances" was added because it was erroneously omitted. Language, "Drayage truck owners or controlling parties may only request extensions for legacy drayage trucks being replaced at the site experiencing the delay" was added to clarify the extension may only apply vehicles that need to be replaced by ZEVs at the site experiencing the delay. This should limit the extension requests to those vehicles associated with the site being upgraded. This section also adds language to inform drayage truck owners or controlling parties that they must request this extension "at least 45 calendar days prior to the next applicable compliance date for CARB to consider the request". This is necessary to establish a reasonable time period for staff to consider a complete extension application before the next compliance date where staff must respond within 45 days of complete request being filed.
11. In renumbered section 2014.2(b)(1) "due to circumstances" was added because it was erroneously omitted. In addition, the timeframe of this extension was extended from one year to up to two years and the language, "beginning on the applicable compliance date for the number of vehicles that qualify for the extension" was added to clarify the extension would start on the compliance date that was used to qualify for the extension. The additional time is necessary to meet Board direction to provide more time for infrastructure development and clarification on when the extension would start is necessary to avoid confusion. Finally, the language, "The Executive Officer will grant a single extension per project to delay the vehicle delivery for one year if they determine the fleet owner satisfies the criteria for the delay, based on the information submitted below and the exercise of good engineering judgment" was moved to a new section (F) which follows the time sequence of steps for the Executive Officer's determination.
12. In renumbered section 2014.2(b)(1)(A), language specifying supporting documentation used to substantiate their request for a construction-related delay was added. The drayage truck owner's or controlling party's construction permit issuance date must be at least one year before the next applicable compliance date

for the drayage truck owner or controlling party to be eligible for the extension. This change is necessary to ensure that submitted documentation to request for this extension has specific information that can be used to determine eligibility.

13. In renumbered section 2014.2(b)(1)(B), the language “that occurred after” was added to clarify that circumstances beyond the drayage truck owner’s or controlling party’s control had to have occurred after the construction permit was issued and the above section (A) is now referenced to let a drayage truck owner or controlling party know of the timeline for establishing eligibility. Language “delay in manufacture and shipment of zero-emission vehicle fueling infrastructure equipment” was added as a new criterion to justify circumstances outside drayage truck owner’s or controlling party’s control during the infrastructure construction project. This change is necessary to meet Board direction to provide additional time for infrastructure development, to align with CARB’s other Zero-Emission technology regulations, and in response to stakeholder concerns about recent supply chain constraints and unforeseen issues related to obtaining necessary equipment critical to ZEV deployments. Additional language was added to clearly state “delays due to unexpected safety issues” must be “on the project.” This is necessary to qualify the safety issues must be related to activities conducted at the construction project site, not those from traveling to or from the project site or those unrelated to the construction project itself. Finally, “zero-emission vehicle fueling” was added to qualify the term infrastructure for clarity.
14. In renumbered section 2014.2(b)(1)(C), the language “zero-emission vehicle fueling” was added to qualify the term infrastructure. This change is necessary to ensure there is only one reasonable and logical interpretation of the criteria.
15. Staff added section 2014.2(b)(1)(E) to ensure that regulated entities are aware that electronic submittal of reports are considered signed by the responsible official. It is necessary to make clear to the responsible party that they are signing a document through electronic submission so that they can choose whether this is an action they want to take. In addition, staff added that “hard copy documentation submitted must be signed by the responsible official”. This language is necessary for accountability purposes.
16. Staff added section 2014.2(b)(1)(F) to add language that describes the time sequence of steps for the Executive Officer’s determination. This language is necessary to explain the process used by the Executive Officer in making their determination which was modified to remove the 1-year duration because it is discussed in section 2014.2(b)(1)(A).
17. In renumbered section 2014.2(b)(1)(G)), language was streamlined to reflect “any extension or provision requests that are required to be submitted to TRUCRS@arb.ca.gov” as opposed to listing all the applicable sections in the regulation. In addition, the approval process period was updated from 30 days to 45 days from receipt of a complete submission to ensure optimal evaluation of the submission.

18. In renumbered section 2014.2(b)(1)(H), language was added to clarify the recordkeeping requirements related to applications for the renamed “infrastructure delay extension” process identified in section 2014.2(b).
19. Section 2014.2(b)(1)(I), language was added to specify the reporting and recordkeeping requirements associated with the infrastructure construction delay. It is important to make these requirements explicit and clear so that the regulated party is aware of the requirements. These recordkeeping and reporting requirements are consistent with all other drayage recordkeeping and reporting requirements.
20. Section 2014.2(b)(2) and section 2014.2(b)(2)(A) was added to create a new “Infrastructure Site Electrification Delay” extension that allows a drayage truck owner or controlling party to remain in compliance while experiencing a delay in obtaining power from a utility before their project construction project begins. The original “Infrastructure Construction Delay Extension” language in section 2014.2(b)(1) also includes a “delay in obtaining power from a utility” as an eligible criterion to extend compliance deadlines, but that is after construction begins. This new extension was added in response to stakeholder concerns that some requests for site power may require utility service upgrades that would delay the start of their construction, and Board direction to address these concerns. Language was added extending this extension to a drayage truck owner or controlling party who have entered into a contract of one year or longer to charge or fuel their ZEVs at a single location. This was added in response to stakeholder concerns that third-party offerings including “infrastructure as a service” would not be eligible for this extension. The language added clarifies that a drayage truck owner or controlling party who has contracted for infrastructure installation regardless of whether the equipment is leased or owned is still eligible to apply for this extension. Language was added to sunset this extension on January 1, 2030, which is reasonable because this date is at least six years after the effective date of this regulation and when staff expect most infrastructure construction projects should have already been initiated and planned out for several years. Therefore by 2030, utilities should be aware of most locations where site upgrades would be needed. Finally, language was added to ensure that drayage truck owners or controlling parties utilizing this extension would deploy as many ZEVs as can be supported by the power the utility can serve immediately without a utility service upgrade needed to meet their compliance requirement, and over time if more power becomes available at the site. The extension would apply to delays in power needed for charging equipment and electrolyzers used in the production of hydrogen. The modifications were needed to recognize drayage truck owners and controlling parties acting in good faith who are met with circumstances beyond their control when requesting upgraded or new electricity service from a utility. This addition is necessary to balance Board direction to provide more time for infrastructure delays if they occur while maximizing the ACF regulation’s goals.
21. In new section 2014.2(b)(2)(A)(1), language was added to specify the time period for eligibility under the new site electrification delay language. Language was added to let drayage truck owners or controlling parties know the length of the initial extension is based on the utility information and can be up to three years. Language

was added to let the drayage truck owner or controlling party know the time period for which the extension starts. Language was added to let a drayage truck owner or controlling party who was granted an initial three-year extension, know they can request an additional two years, thereby allowing this extension to extend for as long as five years. Additional language was added to let a drayage truck owner or controlling party know they must renew their initial three-year extension at least 45 calendar days prior to the expiration of their initial, granted extension. 45-days was selected as a reasonable amount of time for a drayage truck owner or controlling party to apply for a renewal and is consistent with the time for staff to review the request. The language was added to ensure the drayage truck owner or controlling party knows the renewal request requires they submit new, additional or updated information from the utility substantiating their on-going delay in obtaining site power before the initial three-year extension expires.

22. In new section 2014.2(b)(2)(A)(2) language was added that describes CARB's process for determining the number of extensions the drayage truck owner or controlling party may request. This section informs a drayage truck owner or controlling party they may request this extension only for the number of ZEVs and associated charging or fueling equipment that is needed to meet its compliance obligation and that the utility is unable to supply sufficient power. Language was added to inform a drayage truck owner or controlling party that the extension will be approved for the number of ZEVs that cannot be supported and the drayage truck owner or controlling party must deploy the maximum number of ZEVs that can be supported. Additionally, the information requested would need to be provided by year to ensure it is consistent with compliance requirements, and to define the duration of the extension.
23. In new section 2014.2(b)(2)(B) language was added letting a drayage truck owner or controlling party know what information to submit and the email address to submit it. The information (1) is a copy of the drayage truck owner's or controlling party's application to the utility requiring site electrification that is consistent with the number of ZEVs the drayage truck owner or controlling party must deploy to meet their next upcoming compliance date and (2) the utility's response showing that the project will take longer than a year were added to leverage information that is already being shared between a drayage truck owner or controlling party and the utility as part of their site electrification agreement. These two pieces of information establish the need for the delay as well as important details the utility would need to determine the number and type of ZEV and charging or fueling equipment the site can immediately support. It is necessary that the drayage truck owner's or controlling party's application be for service that is consistent with the number of ZEVs they must deploy to meet their obligation to ensure the application process is not gamed if a drayage truck owner or controlling party were to ask for service for many more vehicles than they actually need to comply, and thus artificially inflate the time it would take a utility to serve that need. Language was also added to give a drayage truck owner or controlling party flexibility if a utility is unable or unwilling to execute a contract to move forward with a project, to instead submit the initial application to

the utility requesting site electrification and a signed attestation from the utility stating they will proceed with the project. The executed contract between the utility and the drayage truck owner or controlling party or signed attestation is proof that the infrastructure project will proceed. The reason these documents are requested besides providing important information for (4), is they provide assurance the project will proceed and when it can be built out. The supporting documentation under (3) is to get an estimated completion date even if the estimated completion date could be on supporting documentation already discussed, such as the initial or executed contract, or application for site power, as the estimated completion date may have shifted based on information from the utility. Language was added to specify that documentation including the amount of electrical capacity the utility can supply to the site each year of the requested delay in kilowatts to ensure staff would have sufficient information to assess how many ZEVs could be deployed and how many extensions would be warranted in the case of such a delay. In addition, language was added requesting the drayage truck owner or controlling party to submit the utility's reason for the delay. This reason this is included is to provide more information as to what could be causing the delay in obtaining grid power from the utility. Stakeholders have requested CARB provide an issues log or some other mechanism for housing and sharing statewide-scale information about infrastructure upgrades needed to support the ACF. The reason why the utility cannot provide the requested power for the site could also help identify any systematic issues either within the utility's territory that could also impact neighboring sites, regional differences within the same utility's territory, and even differences between utilities for similar requests. Language was added to information and supporting documents must specify the number, and weight class of ZEVs and associated ZEV fueling infrastructure equipment that can immediately be supported at the site, and the equipment the site can support during each year of the requested extension until the project is complete. This language was added to clarify that the documentation provided in (1) must have this information as this is what staff will use to determine compliance with the regulation. Language was added in (5) to let drayage truck owners or controlling parties with multiple sites where vehicles are domiciled know they must submit a copy of each site's infrastructure capacity evaluation from the utility or a third-party licensed professional electrical engineer indicating amount of electrical capacity the utility can immediately supply to the site in kilowatts, the number of ZEVs and associated charging or hydrogen fueling equipment the site can immediately support. This initial site capacity assessment could also be the same information provided in the initial or executed contract, or application with the utility used as supporting evidence in the application, or it could be done as a preliminary evaluation by the utility or a third-party licensed professional electrical engineer. Flexibility to submit preliminary site infrastructure capacity evaluations from a licensed professional electrical engineer was added to give a drayage truck owner or controlling party control over the process, however the person performing site capacity load calculations must be qualified and licensed to perform the work. This language was added to ensure the drayage truck owner or controlling party needs the extension, i.e., the drayage truck owner or controlling party does not have

enough existing capacity at their other sites to meet their applicable compliance dates.

24. Staff included section 2014.2(b)(2)(C) to ensure that regulated entities are aware that electronic submittal of reports are considered signed by the responsible office. It is necessary to make clear to the responsible party that they are signing a document through electronic submission so that they can choose whether this is an action they want to take. In addition, staff added that "hard copy documentation submitted must be signed by the responsible official". This language is necessary for accountability purposes.
25. In new section 2014.2(b)(2)(D), language was added to inform a drayage truck owner or controlling party that the Executive Officer will grant an extension for the time-period specified in section (A)(1) and number of vehicles specified in (A)(2) if they determine the drayage truck owner or controlling party satisfies the criteria for the delay, based on the information submitted in (B), and the exercise of good engineering judgment language was added to inform the fleet owner the Executive Officer's determination is based on engineering and submitted information.
26. Section 2014.2(b)(2)(E) language was added as this information is necessary to inform the drayage truck owner or controlling party know when they should expect a response from CARB. This language is consistent with other parts of the regulation.
27. Section 2014.2(b)(2)(F) was added to specifies the reporting and recordkeeping requirements associated with the infrastructure site electrification delay. It is important to make these requirements explicit and clear so that the regulated party is aware of the requirements and maintains compliance records for a period of time necessary to respond to enforcement inquiries. These recordkeeping and reporting requirements are consistent with all other drayage recordkeeping and reporting requirements.

(D) Section 2014.3

1. In section 2014.3(b), staff modified the description of "Right of Entry", to improve readability.

C. High Priority and Federal Fleets

The following numbered list provides the purpose and rational for staff's proposed changes to the draft regulation order provided as Appendix A-2.

(A) Section 2015

1. In the Fleet Applicability section 2015(a)(1), language was added to clarify that section 2015(c) referenced in the text is about the exemptions specified in that section with other minor modifications to improve readability. Language was modified to remove "or combination of entities under common ownership or

control” and to add “including revenues from all subsidiaries, subdivisions, and branches”. This change was necessary to clarify the intent of the requirement that entities with \$50 million or more would be subject to the regulation. Large corporations with multiple business units are better positioned than smaller entities to transition their fleets to zero-emissions technologies, as described in staff’s Initial Statement of Reasons for the regulation. Because common ownership or control references vehicles, the previous language was unintentionally vague. This addition helps clarify that staff intend to include entities that make \$50 million in annual revenue when accounting for the revenues of all of their subdivisions, subsidiaries, and branches and that the subdivisions, subsidiaries and branches would remain subject to the regulation regardless of the revenue for each unit. A new sentence was added to specify that fleet owners that meet the applicability criteria are subject to the regulation for a minimum period of time as specified in section 2015(l). The change was necessary to improve readability of the regulation and to more clearly specify where the fleet owner can find the information. The minimum period of time reference was included in the original proposal and rationale for including it can be found in staff’s Initial Statement of Reasons for the regulation (ISOR).

2. In section 2015(a)(1)(A), language was modified to specify that the annual revenues referenced in the applicability section would be those reported to the United States Internal Revenue Service in the calendar year immediately preceding the current calendar year. This change is necessary to clarify to which year the language was referring and to ensure there is only one reasonable and logical interpretation of the criteria.

Language was also added to specify that the \$50 million requirement as reported to the Internal Revenue Service is applicable to the equivalent currency value and reporting entity with the same revenue if based in other countries to maintain equal treatment of affected entities regardless of where they are based. Affected vehicles will include those that enter California with origins in Mexico and Canada, so limiting the applicability to only US currency in dollars and the United States Internal Revenue Service unintentionally left out entities that otherwise meet the same thresholds and would otherwise create a potential loophole or unfair advantage to entities based outside California whose revenue could be in other currencies.

In addition, language was modified to specify that combinations of entities would be under common ownership, rather than “operating” under common ownership “or control”, because the “operating” and “control” terms were unnecessary and potentially create confusion. The intent of this requirement is such that large entities with multiple subsidiaries or common ownership of individual business units would each be subject to the regulation if their total gross revenues in combination exceed \$50 million annually.

3. In section 2015(a)(1)(B), language “the operation of” was added to the applicability section for fleet owners that own, operate, or direct “the operation of” 50 or more vehicles in the total fleet. This change is necessary to improve readability and

consistency with other parts of the regulation that reference directing “the operation of” vehicles.

4. In section 2015(a)(1)(D), language was added to specify the scope and applicability of the regulation would apply to state and local governments that elected to utilize the ZEV Milestones Option within this section of the High Priority and Federal Fleets regulation. The modification ensures that all of the High Priority and Federal Fleets regulation requirements would be applicable to State and Local Government Fleets that opted into the ZEV Milestones Option. This change implements the Board direction to allow State and Local Government fleets to have access to this compliance option as it achieved the same objectives to phase-in ZEVs and may provide more flexibility to affected fleets. These fleets would otherwise only be subject to the State and Local Government Fleets regulation commencing with section 2013.
5. In section 2015(a)(2) about Vehicle Scope, language was added to clarify that the section 2015(c) referenced in the text is about exemptions along with other clarifying language to improve readability. Language was modified to move “operated in California” to the end of the section to improve readability, and to ensure that vehicles in the scope of the regulation are those that are operated in California and that have GVWR greater than 8,500 lbs., are light-duty package delivery vehicles, or are yard tractors. Language was removed specifying light-duty package delivery vehicles must have a GVWR equal to or less than 8,500 lbs. because this language was surplus, as the definition of light-duty package delivery vehicle already includes this GVWR description.
6. In section 2015(a)(3), language was modified to limit applicability of the hiring requirements to only those hiring fleets subject to this regulation. References to section 2013 were deleted as it is duplicative with hiring requirement language already in that regulation.
7. In section 2015(b), the definition of “authorized dealer” was modified to specify that the term means independent entities that are both authorized by a manufacturer and in fact capable of performing repairs needed to maintain vehicles. This modification was necessary because the previous language did not reference who would authorize the dealer and was not specific about the type of repairs of which the dealer is capable. This change is necessary to clarify to which year the language was referring and to ensure there is only one reasonable and logical interpretation of the criteria.
8. In section 2015(b), the definition of “battery-electric vehicle” or “BEV” was added that specifies it means the same as defined in the Code of Federal Regulations. The addition of the definition is necessary because other modifications to the Daily Usage Exemption differentiate between battery-electric and fuel-cell electric vehicles, so a definition was needed to make the delineation. This definition was selected to be consistent with the definition in CARB’s Zero-Emissions Powertrain Certification regulation, on which this regulation relies for considering whether a ZEV is available to purchase.

9. In section 2015(b), the definition of "California fleet" was modified to remove the statement that "if a vehicle is operated in California at any time during a calendar year, it will be considered part of the California fleet for the entire calendar year" and move the language into section 2015.2. This change was necessary as the limitation is only relevant for fleets using the ZEV Milestones Option. The change makes it more clear how CARB will calculate the number of trucks in the California fleet for purposes of determining the number of ZEV required that compliance year and closes a potential loophole by which Milestones fleets could rotate vehicles in and out of the state and artificially lower their compliance requirement. In other words, a fleet owner that operates 100 trucks in California, would not be able to claim that they were removed from the fleet after operating in California to lower the count of trucks operating in California. This issue does not exist for Model Year Schedule fleets, because their compliance obligations are determined on a per-vehicle basis, rather than a calculation based on the size of the California fleet.

Language was also modified to move the "in California" modifier to apply to "vehicles operated" rather than "fleet owners", because the intent of the definition is to apply to vehicles that are operated in California, as opposed to where the fleet owner may be.

10. In section 2015(b), the definitions of "Class 4", "Class 5", "Class 6", "Class 7", and "Class 8" were moved under a new definition for "Weight Class" as subsections. This change was necessary to group these definitions under the common definition for weight class to specify what GVWR determines which weight class.
11. In section 2015(b), the definition of "configuration" was modified to simplify the definition to mean the primary intended function for which a complete vehicle is designed, or as determined by the body permanently attached to the chassis of an incomplete vehicle. Reference to equipment integrated on the body was removed to prevent unintentionally including auxiliary or equipment for secondary uses in the definition. Examples were included to specify terms commonly understood by those directly affected by the regulation that would exemplify the defined term, and examples of commonly understood equipment terms that would not be included in the definition were provided.
12. In section 2015(b), the definition of "controlling party" was modified to specify that the term is applicable to managing day-to-day operations of vehicles, rather than fleets, because the definition of common ownership or control on which the controlling party definition is based applies to vehicles rather than fleets. This change is necessary for consistency and to prevent more than one reasonable and logical interpretation of the criteria.
13. In section 2015(b), the definition of "declared emergency event" was modified to include any degree or condition of emergency specified in the California Government Code section 8558. This change was necessary because the code section referenced includes both conditions and degrees of emergency, and leaving out the degrees of emergency would unintentionally narrow the requirements.

14. In section 2015(b), a new definition was added for “five-day pass” to mean a pass that allows a fleet owner to operate a non-compliant vehicle up to five consecutive days in California one time per calendar year per vehicle. This definition is needed to explain the term when referenced in the regulation related to the newly added five-day pass exemption, which is explained later in this document.
15. In section 2015(b), the definition of “fleet owner”, language was removed from subsection (B) referencing “other equally reliable evidence” because the term was undefined, and the rental or lease agreement should identify the party responsible for compliance. This simplifies implementation and enforcement of the regulation and reduces burden on regulated parties by requiring a single source of this identification.

Language was also moved from subsection (C) to the enforcement section of 2015.6 to group similar enforcement criteria together and improve readability of the regulation.

Additionally, “powertrain retrofits” was modified to “converting a vehicle to a ZEV”. This change is necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.

16. In section 2015(b), the definition of “gross annual revenue” was modified to add “or its equivalent in another country”. Vehicles enter California with origins in Mexico and Canada, so limiting the applicability to only US currency in dollars and the United States Internal Revenue Service unintentionally left out entities that otherwise meet the spirit of the threshold, and this change was necessary to ensure such entities were included in the regulation to maintain a level playing field.
17. In section 2015(b), a new definition was added for “hydrogen fuel-cell electric vehicle” or “FCEV” to mean a vehicle with an electric motor where energy for the motor is supplied by an electrochemical cell that produces electricity via the non-combustion reaction of hydrogen. The addition of the definition is necessary because other modifications to the Daily Usage Exemption differentiate between battery-electric and fuel-cell electric vehicles, so a definition was needed to make the delineation. This definition was selected to be consistent with the definition in CARB’s Zero-Emissions Powertrain Certification regulation, on which this regulation relies for considering whether a ZEV is available to purchase.
18. In section 2015(b), a new definition was added for “intermittent snow removal vehicle” to mean vehicle that is equipped with a snow plow or snow blower mounting attachment and a control system for the plow or blower. This definition is needed to explain the term when referenced in the regulation relative to the newly added exemption for intermittent snow removal vehicles, which is explained later in this document.

Directly affected individuals also indicated the vehicles may be equipped with plow and blower mounting attachments, which are essential equipment for removing

snow from roadways and are a primary feature of the vehicle configuration, therefore are necessary to include in the definition. Control systems are necessary to include as these systems are integral to the operation of such features and are used to move and engage the mechanisms operate the plow or blower.

This definition was crafted with input from stakeholders that own and operate intermittent snow removal equipment and is therefore generally understood by those directly affected. The definition and exemption were added in response to stakeholder concerns.

19. In section 2015(b), the definition of "internal combustion engine vehicle" was modified to add "that includes an internal combustion engine". This change was necessary to ensure that the term included vehicles with such engines and was made to improve the clarity of the definition.
20. In section 2015(b), the definition of "light-duty package delivery vehicle" was modified to specify that the Code of Federal Regulations code section referenced is also being incorporated by reference, which is necessary because this is required for compliance with the Administrative Procedures Act, and the phrase was erroneously left out of the original proposal.
21. In section 2015(b), the definition of "manufacturer" was modified to specify that the term includes those who manufacture yard tractors in addition to on-road motor vehicles throughout the definition. This change was necessary to ensure that the entire definition applies to yard tractors as well as on-road vehicles, as some yard tractors are designed not to be driven on highways and would erroneously have been left out of the definition if it only applied to on-road vehicles.

Language was also added to the definition to clarify that it includes any intermediate- or final-stage manufacturer that completes vehicle assembly prior to first purchase of the vehicle other than for resale. This addition is necessary to ensure that intermediate- and final-stage manufacturers, such as those that alter originally equipped chassis, and final stage manufacturers, such as body builders, upfitters, dealers and distributors, are included in this definition. These entities are integral to the manufacturing of final assembly vehicles. The modified ZEV Purchase Exemption specified the Executive Officer will rely on data gathered from vehicle manufacturers and their websites, so it is necessary to ensure that entities involved in all stages of assembling vehicle can be used to help make the determination whether a vehicle is available to purchase.

22. In section 2015(b), the definition of "Milestone Group 2" was modified to add pickup trucks to the definition. This addition was necessary to address stakeholder concerns that pickup trucks with certain removable features could be interpreted as belonging to other vehicle categories; this change ensures only one reasonable and logical interpretation that pickup trucks are included in Milestone Group 2.
23. In section 2015(b), a new subsection (C) was added for the definition of "minimum useful life" to specify if the vehicle no longer has its originally equipped engine, or

the model year of the originally equipped engine is not able to be determined, the model year of the vehicle less one year must be used to determine when the thresholds described in subsections (A) and (B) above are met. This is necessary to ensure that the minimum useful life can be determined by CARB staff when assessing compliance, even when vehicles are purchased without their original engine, or when the original engine year cannot be determined. The approach of using the vehicle model year less one year is consistent with common industry practice of installing engines with a model year one year prior to the model year of the vehicle it is placed in.

24. In section 2015(b), a new definition was added for “mobile ZEV fueling provider” to mean an entity that provides the service of, or is engaged in the sale, rental, or lease of equipment for the purpose of, delivering hydrogen fuel or electricity directly from a mobile vehicle or portable equipment into another vehicle’s fuel tank or battery for other than the dispenser’s own consumption. This definition is needed to identify the types of entities fleet owners must gather information from when applying for the Mutual Aid Assistance exemption. It is necessary to specify that this includes entities that both provide mobile fueling as a service, and those that rent, sell, or lease mobile fueling equipment because both kinds of entities exist and staff expect fleet owners to make a good faith effort to find mobile fueling service and equipment providers to attempt to find a solution that would allow them to utilize a ZEV in mutual aid situations. It is necessary to specify that mobile fuelers would deliver hydrogen or electricity from a vehicle or portable equipment because the definition is specific to ZEV mobile fuelers, and the only two fuels today that can fuel ZEVs are hydrogen and electricity. This fuel can be delivered both from a vehicle under its own motive power, or from portable equipment that is towed behind another vehicle or placed on the back or in the cargo area of a vehicle, so both types of delivery systems are applicable. Specifying that the fuel would be delivered for other than the dispenser’s own consumption ensures the definition does not include fleets that purchase their own mobile fueling solutions and prevents a loophole by which fleet owners could use themselves to justify an exemption request for the Mutual Aid Assistance exemption, which would be a conflict of interest.
25. In section 2015(b), the definition of “model year” was modified to mean the production period as assigned by the manufacturer when certifying an engine or vehicle for sale, pursuant to title 17, CCR section 95662(a)(16). This change was necessary as the language previously pointed only to a California Code of Regulations section that describes the process by which manufacturers must select a model year for a production vehicle. This level of specificity is not necessary for this regulation as the fleet owner is not involved in determining the vehicle model year, so the definition has been modified to refer in plain language to the model year that has been assigned by the manufacturer, rather than just pointing to the procedure by which manufacturers must chose the model year. Manufacturers set the model year when certifying engines or vehicles for sale, so this definition was selected to mirror this fact.

26. In section 2015(b), a new definition for “motor vehicle” was added to mean the same as defined in the California Vehicle Code section 415. This addition was necessary to point to existing California law that already defines this term and was also necessary as this term is used throughout the regulation and a definition of the term was erroneously left out of the original proposal.
27. In section 2015(b), language was modified in the “notice to proceed” definition to change “powertrain conversion installer” to “installer that converts vehicles to ZEVs”. This change is necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.
28. In section 2015(b), the definition of “pickup truck” was modified in response to stakeholder concerns to include the phrase “a ‘pickup truck’ with removable bed covers or camper shells installed are considered ‘pickup trucks’ for the purpose of this regulation”. This change was necessary because stakeholders stated the previous definition of pickup truck needed more details as to whether removable features added to the vehicle without modifying the truck’s body could be interpreted to categorize them in other vehicle groups for the regulation. This change ensures only one reasonable and logical interpretation that the vehicles are still considered pickup trucks even with such modifications.
29. In section 2015(b), the definition of “rated energy capacity” was modified to include a source for the referenced test or analysis procedures and to incorporate those procedures by reference in this regulation. This definition is consistent with CARB’s Zero-Emissions Powertrain Certification regulations, but that regulation specified the test procedures by which rated energy capacity could be determined. To conform with the Administrative Procedures Act, the test procedures were included from that certification regulation, ensuring clarity when determining the vehicle requirement for fleet owners.
30. In section 2015(b), the definition of “removed from the California fleet” was modified to add “or controlling party”. This was unintentionally left out of the original proposal, as evidenced by subsection (C) which has specific requirements for controlling parties. The change was necessary to improve the readability of this term and ensure it was not interpreted as not including controlling parties.
31. In section 2015(b), new definitions were added for “SAE J1667” and “smoke opacity test”, which were necessary to define the technical requirements and process for producing the smoke opacity test documentation that can be used to meet the odometer recordkeeping requirements of section 2015.5. The specific definitions selected were necessary to reference existing test procedures for performing such tests and to be consistent with other CARB regulations that reference and require the same tests.
32. In section 2015(b), a new definition was added for “test fleet” to mean vehicles that are owned and operated by a manufacturer that are not used for commercial purposes and are operated only to demonstrate functionality to buyers, test

durability, or gather data for engine or vehicle certification or research. It includes Vehicles operating under a CARB-issued experimental permit as authorized by California Health and Safety Code section 43014 as test fleet vehicles. This definition is needed to explain the term when referenced in the regulation related to the newly added exemption for test fleets, which is explained later in this document.

It is necessary to ensure that only manufacturer vehicles are included in the definition because manufacturers are the party responsible for research, testing, and validation of the vehicles they sell, and maintain limited numbers of test vehicles for these purposes. Manufacturers are allowed to continue selling combustion powered vehicles and it is necessary to allow them to maintain these fleets of test vehicles to enable compliance with applicable California certification law requiring such testing to occur.

Certain vehicles are eligible to apply for and be issued CARB experimental permits for the purposes of testing and certification, and only manufacturers may apply for them. This is a straightforward way to identify vehicles that meet the spirit of the definition based on existing California law, and thus are necessary to include in the definition.

The definition and exemption were added in response to stakeholder concerns.

33. In section 2015(b), the definition of "vehicle" was modified to remove reference to "motor vehicle", as a conforming modification with the newly added definition for "motor vehicle". This definition was also modified to reference a device as defined in Vehicle Code section 670 to ensure this regulation was internally consistent with existing California law. The yard tractor portion of the definition was left in to ensure that off-road yard tractors, or those that are not intended for use on highways, are included in the definition because this regulation applies to such yard tractors in addition to on-road vehicles.
34. In section 2015(b), the definition of "vehicle awaiting sale" was modified to include all new vehicles that are driven to be delivered to a fleet owner, rather than just those driven for the first time to an ultimate purchaser to be placed in service outside of California. The originally proposed definition unintentionally excluded vehicles being delivered in California and limited the definition to vehicles being driven for the first time. Vehicles could be driven multiple times before reaching the fleet owner purchaser, so it was necessary to remove this limitation.
35. In section 2015(b), language was modified in the "vehicle purchase" definition to change "powertrain conversion installer" to "installer that converts vehicles to ZEVs" and "powertrain conversion" to "converting a vehicle to a ZEV". These changes are necessary to ensure the language is referencing only vehicle conversions to ZEVs and not to other combustion technologies, which would be inconsistent with the purpose of the regulation.

Language was also modified to specify that the term refers to an action the fleet owner is taking, and that "placing an order" is specifically referring to an order to

acquire the legal or equitable title to a vehicle, because other orders for vehicles are possible, including parts orders. These changes are necessary to ensure there is one reasonable and logical interpretation of the criteria.

Language was added to the definition to include entering into a lease agreement with a contract term of one year or more as an action fleet owners can take to count as a vehicle purchase. This was necessary because the statement was erroneously excluded, while subsection (D) indicated staff's intent to include this type of action.

Language was added to indicate "a vehicle purchase does not include renewing a lease vehicle already in the California fleet". This is necessary to prevent the unintended consequence of a renewed lease counting as a new vehicle purchase, which would inadvertently require a ZEV purchase, or increase the California fleet size for a fleet owner that is simply renewing a lease for the same truck. This change was made to maintain a level playing field for fleets that lease compared to those that own their equipment and in response to stakeholder concerns.

Language was added to subsection (A) and (B) to specify that actions taken with authorized dealers and entities that convert vehicles to ZEVs, in addition to manufacturers, would qualify as vehicle purchases under these subsections. This change was necessary to avoid an erroneously narrow definition for purchase agreements or notices to proceed.

Language was modified in subsection (D) to specify that the lease agreement is specific to vehicles being placed in service in the California fleet. This modification is necessary to prevent agreements for leases placed in service outside California to count as a vehicle purchase action, which would be an unintended consequence with potentially negative compliance implications for fleet owners.

36. In section 2015(b), a new definition was added for "waste fleet" to mean the vehicles owned and operated by a fleet owner that is contracted via franchise agreement or long-term contract, with either a minimum length of 10 years or more, or with a minimum length of 3 years but includes a renewal provision when satisfying the contract terms, with a municipality that is mandated to support the hauling, transfer, and processing of diverted in-state organic waste to produce biomethane. This definition is needed to explain the term when referenced in the regulation related to the new option for waste and wastewater fleets, which is explained later in this document under the Waste and Wastewater Fleet Option.

The criteria that all fleets be contracted via a franchise agreement or a long-term contract, is necessary to be consistent with the concept of providing an extended compliance schedule through 2042 and would not make sense to apply on a 1- or 2-year basis. This provides clarity on the long-term requirements, and it simplifies implementation and enforcement. It would be too complex for staff and fleet owners to track and properly assess compliance for short-term contracted fleets that would regularly move vehicles in and out of the option and have fluctuating compliance requirements.

The criteria that all contracts be with municipalities mandated to support the hauling, transfer, and processing of diverted in-state organic waste to produce biomethane is necessary to limit applicability of the term to fleets that are supporting the production of biomethane and assisting with implementing the organic waste diversion provisions of SB 1383 (Lara, Chapter 395, Statutes of 2016), which is explained later in this document under the Waste and Wastewater Fleet Option.

This definition was crafted with suggested language from stakeholders that are waste fleets as defined and is therefore generally understood by those directly affected. The definition and option were added in response to stakeholder concerns.

37. In section 2015(b), a new definition was added for “wastewater fleet” to mean the vehicles owned and operated by a government agency or subdivision whose primary purpose is collection, treatment, and recycling of wastewater and biosolids and that owns and operates a wastewater treatment facility. This definition is needed to explain the term when referenced in the regulation related to the new option for waste and wastewater fleets, which is explained later in this document.

The criteria that the term only includes government agencies or subdivisions whose primary purpose is collection, treatment, and recycling of wastewater and biosolids and that own and operate a wastewater treatment facility is necessary to limit applicability of the term to fleets that are supporting the production of biomethane while contributing to implementing the organic waste diversion provisions of SB 1383 (Lara, Chapter 395, Statutes of 2016), which is explained later in this document under the Waste and Wastewater Fleet Option.

Wastewater entities always own and operate wastewater treatment facilities, because that is the primary facility by which these public entities fulfil their primary purpose. Including these criteria ensures only the intended entities are included.

This definition was crafted with suggested language from stakeholders that are wastewater fleets as defined and is therefore generally understood by those directly affected. The definition and option were added in response to stakeholder concerns.

38. In section 2015(b), a new definition for “weight class” was added to mean the category of a vehicle’s GVWR as specified below. This addition is necessary to conform with modifications to the ZEV Purchase Exemption, which will rely on vehicle weight class to assist in making the determination of whether a vehicle is available to purchase as a ZEV.

Additional subsections (A) through (H) were added or moved from previous definitions to specify various weight class categories, including new definitions for “light-duty”, “Class 2b”, and “Class 3”. All these definitions are consistent with the US EPA classification system for medium- and heavy-duty vehicles which split vehicle categories by GVWR and align with those categories.

39. In section 2015(b), the definition of “zero-emissions powertrain” was modified to point to the correct code section 1956.8(j)(27), because the originally proposed

definition erroneously referenced a different code section that was not the definition of “zero-emissions powertrain”.

40. In section 2015(b), a new definition of “ZEV fueling infrastructure” was added to mean a fueling system that provides the appropriate fuel type of energy a ZEV (e.g., electric charging infrastructure or cryogenic fueling tank and dispenser). This definition is necessary to state the type of equipment the ZEV Infrastructure Delay Extension is meant to cover. This definition was selected to be consistent with other CARB regulations for ZEVs and is intentionally written broadly to include other fuel types besides electricity and hydrogen if a future ZEV fuel type becomes available.

41. In section 2015(c)(11), language was modified to change “public” to “government” for consistency with the definition of “government agency” in the regulation.

Language was also added to ensure state and local government fleets that opt-in to the ZEV Milestones Option were not exempt from the regulation. This is necessary to avoid a potential loophole in the language by which the state and local government fleets that opt-in to the ZEV Milestones Option would not have to comply with any regulatory requirement.

42. In section 2015(c), a new subsection (12) was added to exempt vehicles in test fleets from the regulation requirements. This exemption is necessary to prevent test vehicles used by vehicle manufacturers from counting against their fleet compliance, as these vehicles are needed to validate technology, durability, and to be used as demonstration vehicles which could prevent them from complying with other requirements for meeting other vehicle or engine regulations.

It is also necessary to ensure manufacturers can continue to test, demonstrate, and validate combustion vehicles after the zero-emission fleet requirements of the regulation begin, because manufacturers may still legally sell combustion powered vehicles that require testing and validation to be performed to comply with applicable California certification law.

This exemption was added in response to stakeholder concerns.

43. In section 2015(d), language was modified to specify which compliance options to which the section references referred.

Language was also added to clarify that until January 1, 2030, fleet owners may switch between the two primary compliance options only if their California fleet complies with the currently selected compliance option and the desired alternative compliance option they want to switch to, from January 1, 2024, through the date the option is switched. This is necessary to provide a clear regulatory framework for switching between compliance options. It provides additional flexibility to fleets to manage their compliance, while guarding against gaming the compliance options to delay compliance obligations. This flexibility was added in response to stakeholder concerns. The end date specified was selected to be consistent with the end date for allowing public fleets to opt-in to the ZEV Milestones Option. This date also provides sufficient time for fleets to assess which option would work best for their operations,

while providing a reasonable cutoff time to reduce administrative burden of having to assess backdated fleet compliance if a fleet owner desired to switch later in the regulation timeframe.

44. In section 2015(e), language was modified to specify that NZEVs are counted the same as ZEVs for the whole regulation, except as specified in the Daily Usage and ZEV Purchase Exemptions. The original proposal erroneously stated that NZEVs would only count as ZEVs for the purposes of compliance with the general requirements of the regulation. This change is necessary to ensure that NZEVs are counted as ZEVs for compliance, reporting, recordkeeping, and enforcement purposes as well. The addition specifying how NZEVs are treated for the ZEV Purchase or Daily Usage exemptions is necessary to conform with changes to those exemptions where delineation between NZEVs and ZEVs is essential. Language was also modified to change the word "older" to "earlier" because this improved the readability of the regulation.

45. In section 2015(f), language was modified to specify the vehicles that must be reported should include those in the "calendar" year, not "compliance" year, which was an undefined term erroneously included in the original proposal.

Language was also modified to specify which requirements controlling parties must meet, and which requirements their vehicles under common ownership or control must meet. This change was necessary to explicitly state the regulation sections that the language was originally intended to cover.

46. In section 2015(g)(1), language was added to specify requirements for verifying each fleet a fleet owner hires or dispatches "to operate in California" is listed on CARB's website. This change is necessary to limit the scope of this requirement only to those vehicles hired or dispatched to operate in California as opposed to other states. Language was also added specifying the requirement to verify applied for each calendar year; this is necessary to specify the time frame within which a fleet owner must comply with the verification requirements.

47. In section 2015(g)(2), language was added to allow disclosures of regulation applicability to be provided either in the hiring contract or agreement or as an addendum to the agreement or contract. It is necessary to not require fleets to alter existing contract language and allow for flexibility in how the disclosure is provided, while ensuring that the disclosure is provided as part of the contractual agreement. This change was added in response to stakeholder concerns.

Language was also modified to specify that the website should be the CARB Advanced Clean Fleets webpage, not just CARB website, because the CARB website is not all specific to Advanced Clean fleets.

48. In section 2015(h), language was modified to specify which compliance options to which the section references referred.

Language was also modified to clarify what was meant by the term "group" and clarify the requirement that each participating entity must demonstrate compliance

with the regulation requirements on an individual basis. The originally proposed language needed further detail, and this change helps specify to which requirements such fleet owners must demonstrate compliance.

49. In section 2015(i), language was shortened and moved referencing fleet compliance within 30 days of newly adding vehicles to the California fleet for newly formed fleets. This change is necessary to improve readability of the regulation and prevent unnecessary repetition of similar language.
50. In section 2015(j), language was modified to specify that newly affected fleets are those that operate vehicles in California that newly meet only the applicability criteria specified in sections 2015(a)(1)(A) through (C). This change is necessary because the originally proposed language would unintentionally allow fleet owners that met the \$50 million annual revenue or 50 vehicle thresholds, but that did not operate vehicles in California prior to 2024, to be granted two years to meet compliance requirements after newly bringing a vehicle into the California fleet. This change assures there is a level playing field for fleets that complied from the beginning versus those that opted to keep their trucks outside of California instead of complying with the regulation. The change now limits the “newly affected” fleets to those that newly meet the \$50 million annual revenue or 50 truck thresholds, not those that newly operate a vehicle in California but that were already within the scope of the regulation as already meeting the thresholds. Conforming changes were made to subsections (1) through (3) to reflect this change.
51. In section 2015(k), language was removed to no longer require fleet compliance within 30 days when there is a merger or acquisition merger or acquisition. This timeframe was determined to be too short to be reasonable for fleet owners and was adjusted in the subsections as specified below. This change was made in response to stakeholder concerns.
52. In section 2015(k)(1), language was added to require compliance with the regulation requirements in case of merger or acquisition no later than one year (365 consecutive days) of the date of the merger or acquisition. This would provide sufficient time for fleet owners to finalize the merging of fleet vehicles, assess compliance needs, place orders for needed ZEVs, and/or adjust the fleet composition to remain in compliance. This change was made in response to stakeholder concerns.
53. In section 2015(k)(3), language was added to require reporting and recordkeeping requirements occur within 30 calendar days of the merger or acquisition. This requirement ensures CARB has enough information about the newly combined fleet to determine the fleet’s compliance obligation, while balancing fleet needs for a reasonable timeframe to come into compliance with any non-compliant vehicles. This change was made in response to stakeholder concerns.
54. In section 2015(n), language was modified to specify that the vehicles referenced in the option were in fact vehicles acquired with funds issued by the State-provided

incentive funding programs. This change is necessary to ensure no more than one reasonable and logical interpretation of this criteria.

55. In section 2015(p), language was removed referring to “certified” “ZEV fleets”, where the “certified” modifier was erroneously included in the original proposal; no certification procedure would exist other than meeting the criteria listed in the subsections. This is necessary to prevent more than one reasonable and logical interpretation of the criteria.
56. In section 2015(p)(1), language was modified to specify which compliance options to which the section references referred, and to specify that the number of ZEVs in the fleet must meet or exceed the number of ZEVs specified in the fleet’s ZEV Fleet Milestone obligation to ensure no more than one reasonable and logical interpretation of this section.
57. In section 2015, a new subsection (q) was added to require fleet owners selling vehicles subject to the regulation to provide a disclosure of regulation applicability warning the potential buyer the vehicle may be subject to CARB requirements. This provides protection to buyers that may not be aware of the regulation from purchasing a vehicle that may need to be replaced sooner than otherwise expected. The specific language included is necessary as it supplies a reasonable warning to a purchaser and a website link where more information can be found about the regulation. The requirement is also necessary to improve compliance and enforceability of the regulation, as it would ensure buyers are aware of potential requirements for the vehicle they would purchase.
58. In section 2015, a new subsection (r) was added to require any ICE vehicle added to the California fleet after January 1, 2024, must be either a 2010 through 2023 model year engine or must be a 2024 or newer model year engine certified to applicable California emissions standards and emissions related requirements. Similar language was added for new ICE vehicle additions to the California fleet to clarify when exemptions to purchase new vehicles are granted, the vehicles need to be certified to applicable California emissions standards and emissions related requirements. This language would apply when fleets are adding ICE vehicles to the California fleet under the ZEV Milestones option or when ICE vehicle purchases are allowed under an exemption. Beginning 2024, California certified engines will have lower emissions than engines certified to federal emissions standards. Without this option, fleet owners would be able to purchase vehicles out of state and operate them in California which would result in more polluting vehicles on California’s roadways for vehicles intended to be operated in the California fleet. This change is necessary to ensure new ICE vehicles purchased during the regulation timeframe are held to the least polluting applicable emissions standards. This change ensures California certified engines are added to the California fleet when ZEVs are not otherwise required and this change results in additional criteria pollutant emissions benefits, as compared to the original proposal. The requirement that engines need to have 2010 or newer engines is necessary to align with existing requirements under the Truck

and Bus regulation and was the last major update to criteria emission control standards.

59. In section 2015, a new subsection (s) was added to exempt vehicles subject to the Zero-Emission Airport Shuttle regulation until January 1, 2027, from the upgrade requirement of sections 2015.1 or 2015.2. This addition is necessary because fleets subject to that regulation already have a potentially less stringent ZEV requirement that becomes more stringent in 2027 and thereafter. This change allows all ZEVs including zero-emission airport shuttles to be counted in the ACF regulation which would simplify compliance and would reduce compliance costs for fleet owners with a mixed fleet of airport shuttles and other vehicles subject to the high priority fleet requirements.

(B) Section 2015.1

1. In section 2015.1, language was modified to clarify that fleet owners must comply with the following requirements if they choose to comply with the ZEV Milestones Option. This is necessary to prevent more than one reasonable and logical interpretation of the criteria.
2. In section 2015.1(a), conforming language was added to clarify that renewing a vehicle lease for a vehicle that is already in the California fleet would not count towards the ZEV Addition requirements. This is necessary to clarify language about how vehicle lease renewals would be treated by the compliance requirement. Stakeholders indicated the original language was too vague and language was added to clarify the original intent.
3. In section 2015.1(a)(1), language was added to clarify that a new ICE vehicle may be added to the California fleet on or after January 1, 2024, only if it was ordered before the regulation effective date. This change is necessary to specify the start date of this requirement.
4. In renumbered section 2015.1(b), language was modified to include a January 1, 2025 start date for when ICE vehicles must begin being removed from the California fleet. This is necessary to provide fleets additional lead time to begin the process of phasing out combustion vehicles and planning for ZEV deployments in the fleet. It is also necessary to align with similar modifications in the Drayage regulation of Advanced Clean Fleets, as well as to be consistent with the start date of the ZEV Milestones Schedule on January 1, 2025. This simplifies the requirement and simplifies implementation by aligning compliance dates. "As long as" was also replaced with more clarifying language "if". Language referring to the California fleet remaining in compliance on or after January 1, 2024 unless the ICE vehicle was granted an exemption or extension or was ordered in advance of the regulation start date was modified and moved to new subsections (1) and (2).
5. In section 2015.1(b), language was modified to specify how to determine when a vehicle must be removed from the California fleet for purposes of complying with the ICE vehicle removal requirement. This is necessary to make it clear when a

vehicle must be removed from the California fleet. Specifying January 1 of the calendar year after the mileage threshold was met is necessary to provide some lead time for vehicles with unpredictable annual mileage, as fleets may not know exactly when they would exceed the threshold. Setting the requirement at the end of the calendar year simplifies determining the compliance date.

The requirement that vehicles are removed from the fleet on January 1 of their 18th year is necessary to provide a clear expectation that because vehicle model year is fixed and age is known, staff expect fleet owners to plan for removing the vehicle by the 18th year. This is also the maximum amount of minimum useful life specified by the legislature.

The requirement that the when the first threshold is reached is consistent with the minimum useful life specified by the legislature.

6. In renumbered section 2015.1(b), a new subsection (1) was added to clarify that the California fleet remains in compliance if no ICE vehicles were added to the California fleet on or after January 1, 2024, with the exception of ICE vehicles purchased pursuant to an exemption or extension or the ICE vehicle was ordered prior to the effective date of the regulation. This addition is necessary to ensure there is one reasonable and logical interpretation of the criteria.
7. In renumbered section 2015.1(b), a new subsection (2) was added to clarify that ICE vehicles can still be in the fleet that were otherwise required to be removed as specified in section 2015.1(b) if they were granted an exemption or extension from the ICE vehicle removal requirements. This addition is necessary to ensure that fleet owners would not be considered out of compliance with vehicles that had been granted an exemption from the requirements or required otherwise to be removed from the fleet.
8. In section 2015.1(c), clarifying language "the Model Year Schedule specified in" and "if the specified criteria are met" were added to improve readability.
9. In section 2015.1(c)(1), language was modified to clarify that fleet owners may exclude a vehicle from meeting the ICE Vehicle Removal requirements compliance date specified in section 2015.1(b) if it is designated as a backup vehicle. This change is necessary to specify that a backup vehicle may be excluded from just the compliance date as the removal requirements apply to new ICE vehicles purchased pursuant to the exemptions or extensions.

The language "may exclude mileage accrued when the vehicle is operated in support of a declared emergency event as specified in section 2015.3(f)(1)" was modified and moved to section 2015.3(a). More rationale about the option can be found later in this document under the "Backup Vehicle Exemption" in section 2015.3(a).

10. In section 2015.1(c)(2), language referring to fleet owners receiving a one-year exemption from the ZEV Addition requirement to purchase a new ICE vehicle was modified and moved to section 2015.3(b). Language was added to specify fleet

owners must request and obtain the exemption no later than one year (365 consecutive days) before the compliance date for the vehicle being replaced, and no earlier than either the year the vehicle model year is 16 years old, or when the vehicle reaches 700,000 miles, whichever occurs first. The application timeframe is necessary to specify when fleet owners may apply for the exemption. The application timeframe related to the vehicle's lifetime selected is necessary to reduce staff burden by minimizing exemption requests when no action is required, while allowing sufficient time prior to the end of a vehicle's useful life to place purchase orders in time for a vehicle to be built and delivered. It also is necessary to ensure fleet owners are taking action to apply for exemptions reasonably in advance of an upcoming compliance date. More rationale about the exemption can be found later in this document under the "Daily Usage Exemption" in section 2015.3(b).

11. In section 2015.1(c)(3), the description of the title was modified from "Infrastructure Construction Delay Extension" to "ZEV Infrastructure Delay Extension" to reflect the change that the section was expanded to include utility delay. Language was modified to make it clear that fleet owners may request an extension from the ICE Vehicle Removal Requirements compliance date to continue operating an ICE vehicle past the required removal date if at a site that is experiencing construction-related delays for up to two years instead of just one. This change was made to address utility and public stakeholder concerns about construction delays that take more than a year to resolve. It is necessary to specify that the ICE vehicle may be excluded from just the compliance date to keep consistency with the other sections. It is also necessary to clarify that the extension may only be requested for an ICE vehicle that is otherwise required to be removed from the fleet as the replacement ZEV could not be used until the infrastructure to charge or fuel it was in place. Only ICE vehicles that require removal would need the extension. This reduces staff burden by minimizing unnecessary extension requests. The language specifying the timeframe for the exemption was modified and moved to section 2015.3(c).

Clarifying language was added that specifies when the fleet owners would be eligible to apply for the extension, "no later than 45 calendar days before the applicable compliance date specified in section 2015.1(b) for the ICE vehicle to be replaced". The time frame selected was necessary to reduce staff burden by minimizing unnecessary extension requests and to ensure fleet owners are taking action to apply for exemptions reasonably in advance of an upcoming compliance date. More rationale about the extension can be found later in this document under the "Infrastructure Delay Extensions" in section 2015.3(c).

12. In section 2015.1(c)(4), language was modified to specify that the fleet owner may request an extension from the ICE Vehicle Removal requirements compliance date specified in section 2015.1(b) for an existing ICE vehicle that is otherwise required to be removed from the fleet. It is necessary to specify that an extension may be requested from just the compliance date to keep consistency with the other sections. It is also necessary to clarify that the extension may only be requested for an ICE vehicle that is otherwise required to be removed from the fleet as only ICE vehicles

that require removal would need the extension to continue to operate until the replacement ZEV could be placed in service. This reduces staff burden by minimizing unnecessary extension requests.

The language "if a new ZEV is ordered one year in advance of the compliance date for the ICE vehicle being replaced and the newly purchased ZEV will not be delivered by the compliance deadline for reasons beyond the fleet owner's control" was modified and moved to section 2015.3(d).

Language was added to establish that the fleet owner must request this extension no later than February 1 of the same calendar year as the compliance date specified in the ICE Vehicle Removal requirements specified in section 2015.1(b). This addition is necessary to specify when fleet owners must apply for the extension. It also is necessary to ensure fleet owners are taking action to apply for exemptions reasonably in advance of an upcoming compliance date. More rationale about the extension can be found later in this document under the "Vehicle Delivery Delay Extension" in section 2015.3(d).

13. In section 2015.1(c)(5), language was modified from "ZEV Unavailability Exemption" to "ZEV Purchase Exemptions" based on comments from stakeholders. The language "fleet owners may purchase a new ICE vehicle and exclude it from the ZEV addition requirement of section 2015.1(a) if no ZEV or NZEV of the needed configuration is commercially available and the conditions of section 2015.3(e) are met" was modified and moved to new subsections (A) and (B).

Language was added to establish that fleet owners must use the exemption in section 2015.3(e)(1) or request the exemptions of section 2015.3(e)(2). This change is necessary to specify that the fleet owner must follow the requirements of the applicable exemption(s), depending on the availability of a ZEV in the needed configuration. This addition is also necessary to distinguish that the exemption in section 2015.3(e)(1) is to be used and the exemptions of section 2015.3(e)(2) must be requested.

Language was added to specify fleet owners must request and obtain the exemption no later than one year (365 consecutive days) before the compliance date for the vehicle being replaced, and no earlier than either the year the vehicle model year is 16 years old, or when the vehicle reaches 700,000 miles, whichever occurs first. The application timeframe is necessary to specify when fleet owners may apply for the exemption. The application timeframe related to the vehicle's lifetime selected is necessary to reduce staff burden by minimizing unnecessary exemption requests, while allowing sufficient time prior to the end of a vehicle's useful life to place purchase orders and have enough time for a vehicle to be built. It also is necessary to ensure fleet owners are taking action to apply for exemptions reasonably in advance of an upcoming compliance date. More rationale about the exemption can be found later in this document under the "ZEV Purchase Exemptions" in section 2015.3(e).

14. In section 2015.1(c)(5), a new subsection (A) was added to establish that fleet owners shall receive an exemption from the ZEV Addition requirement specified in section 2015.1(a) to purchase a new ICE vehicle and shall receive an extension from the ICE Vehicle Removal requirements compliance date specified in section 2015.1(b) for the ICE vehicle to be replaced. This addition is necessary to specify the requirements for which the ICE vehicle to be replaced shall be exempt.

The extension shall remain in effect until the new ICE vehicle fleet owners have ordered is received and they must meet the criteria specified in section 2015.3(e)(1) to qualify. This addition is necessary to clearly state for how long the extension shall remain in effect. This addition is also necessary to establish the criteria that must be met to qualify for the exemption and extension.

15. In section 2015.1(c)(5), a new subsection (B) was added to establish that fleet owners may request and obtain an exemption from the ZEV Addition requirement specified in section 2015.1(a), pursuant to the criteria specified in section 2015.3(e)(2), to purchase a new ICE vehicle. If approved, the fleet owners shall also receive an extension from the ICE Vehicle Removal requirements compliance date specified in section 2015.1(b) for the ICE vehicle being replaced. This addition is necessary to specify the requirements that the replacement ICE vehicle shall be exempt from and receive an extension for upon approval.

The extension shall remain in effect until the ordered new ICE vehicle is received. This addition is necessary to clearly state for how long the extension shall remain in effect.

16. In section 2015.1(c)(6), language was modified from "Exemptions Pursuant to Declared Emergency Events" to "Declared Emergency Response." Language was also modified in the section to allow fleet owners to exclude vehicles that are performing emergency operations from the Model Year Schedule requirements during declared emergency events if they meet the criteria specified in section 2015.3(f)(1). This is necessary to specify which vehicles would be eligible and from which requirements they would be exempt.

Language referring to excluding up to 25 percent of the fleet from the ZEV Addition requirement if the vehicles are needed to provide emergency response services was modified and moved to section 2015.3(f)(1). More rationale about the exemption can be found later in this document under the "Declared Emergency Response" exemption in section 2015.3(f)(1).

17. In section 2015.1(c), a new subsection (7) was added for "Mutual Aid Assistance" to specify that fleet owners may request an exemption from the ZEV Addition requirements in section 2015.1(a) to purchase new ICE vehicles. This addition is necessary to specify the requirements that the new ICE vehicle shall be exempt from.

Fleet owners must request and obtain an exemption pursuant to the exemption criteria specified in section 2015.3(f)(2) at any time. This addition is necessary to establish the criteria that must be met to qualify for the exemption.

Language was added specifying ICE vehicles purchased pursuant to a granted exemption may operate as part of the regular California fleet and are not restricted solely to mutual aid functions. This change was made in response to stakeholder concerns that the language could be interpreted as requiring vehicles purchased pursuant to the exemption to only be used for mutual aid. This change ensures there is only one logical and reasonable interpretation that there is no such restriction.

More rationale about the exemption can be found later in this document under the "Mutual Aid Assistance" exemption in section 2015.3(f)(2).

18. In section 2015.1(c), a new subsection (8) was added for the "Five-day Pass" that allows a fleet owner to report to claim a five-day pass to exclude a vehicle from the California fleet for five consecutive days once per calendar year per vehicle in their fleet pursuant to the criteria specified in section 2015.3(g). This addition was necessary to specify when fleet owners may apply for the pass, and for how long the pass could be granted. It is necessary to limit passes to one pass per vehicle from the California fleet per calendar year to ensure that only one pass per year per vehicle. The intent of the exemption is to address a vehicle that might have to be brought in from out of state for a short period. More rationale about the exemption can be found later in this document under the "Five-Day Pass" exemption in section 2015.3(g).
19. In section 2015.1(c), a new subsection (9) was added to include a exemption by which fleet owners may request and obtain an exemption from the Model Year Schedule requirements if a vehicle is non-repairable due to an accident or other onetime event due to circumstances beyond the fleet owner's control, such as fire or catastrophic failure, that damages the vehicle such that it is not repairable. It is necessary to specify that the exemption applies in case of accidents or onetime events to close a loophole by which fleet owners whose vehicles become non-repairable due to deterioration or wear and tear from normal use would qualify. This would allow a fleet owner to purchase and add to the California fleet a used ICE vehicle of the same configuration and same or newer model year to replace a vehicle that is non-repairable no later than 180 calendar days after the vehicle becomes non-repairable. This purchase window is necessary to provide sufficient time for fleet owners to identify and purchase a used vehicle to replace the non-repairable vehicle. 180 days was selected because it is a reasonable amount of time to purchase a used vehicle, which are readily available through used truck marketplaces, while balancing the need to not have an open ended timeframe that could be a loophole. The used vehicle would be able to operate until the end of the minimum useful life of the original vehicle, and language was added specifying that the replacement's useful life would be based on the engine year of the original vehicle and the mileage accrued on the original vehicle plus any new mileage accrued on the replacement. Fleet owners must report within 30 days of adding the vehicle to the California fleet. Fleet owners would be required to waive certain protections of the Health and Safety Code 43021(a) for the replacement vehicle to qualify, and would need to apply by submitting documents, photos, and information to TRUCRS@arb.ca.gov before adding the used vehicle to the California fleet.

This exemption allows for an exception from the ZEV purchase requirement without changing the schedule the owner would be required to upgrade to a ZEV. This change maintains a level playing field and addresses an unplanned event without changing expected emissions reductions.

Requiring the same configuration and same or newer model year engine is necessary to ensure the replacement vehicle is in fact a replacement and not an expansion of the fleet, and that dirtier engines are not incorporated into the California fleet than what was rendered non-repairable.

Requiring reporting within 30 calendar days of adding the vehicle to the fleet is necessary to give sufficient time to report and aligns with reporting timeframes for other fleets making changes to the California fleet outside the reporting period.

This subsection clarifies that by using this exemption, the fleet owner must voluntarily waive the useful life of the replacement vehicle. This addition is necessary to make explicit the compromise that fleet owners have to make to utilize this exemption. Waiving Health and Safety Code protections is necessary because otherwise, the used vehicle would potentially be granted a longer useful life than the original vehicle if the engine year is newer than the year of the original. This would result in additional emissions impacts and is not consistent with the purpose of the regulation to reduce emissions.

Requiring fleets request and obtain extensions by submitting information to TRUCRS@arb.ca.gov before the used vehicle is added is necessary as it provides clear direction on how and when to apply and allows CARB staff to review requests and determine whether the criteria have been met.

The information required to be submitted is necessary to ensure the vehicle is non-repairable, and that the replacement is of the same configuration. Police reports or insurance statements are generally recognized as reliable documents that indicate whether a vehicle has been in an accident, and whether it is non-repairable. Including a signed attestation from a federal fleet's governing board recognizes and addresses stakeholder concerns that state many public agencies self-insure, and that not all accidents result in police reports. This provides a necessary pathway for these fleets to utilize this exemption, while protecting against forming a loophole by requiring signed attestation from a governing board that could be held publicly accountable for submitting false information. The VIN is necessary to identify the vehicle in the fleet that is being replaced and which vehicle is replacing it. The photographs are necessary to identify the replacement vehicle, and that it is in fact of the same configuration of the vehicle being replaced.

(C) Section 2015.2

1. In section 2015.2, clarifying language "in lieu of the Model Year Schedule Requirements of section 2015.1" was added. Language was added specifying that fleet owners could opt-in to this option until January 1, 2030. Language was added to establish that a vehicle that operated in California at any time during a calendar

year will be considered part of the California fleet for the entire calendar year for purposes of calculating the ZEV Fleet Milestones of section 2015.2(a) and (b). This addition is necessary to provide clear, simple criteria in determining the number of vehicles to be used in the ZEV Fleet Milestone Calculation. It is necessary to deem a vehicle that has operated in California at any time during a calendar year as part of the California fleet for the entire year to ensure that fleets cannot move vehicles in and out of their California fleet to artificially lower their fleet size for compliance with the ZEV Milestones Option. The end date specified was selected to be consistent with the end date for allowing public fleets to opt-in to the ZEV Milestones Option. This date also provides sufficient time for fleet owners that desire to switch options to assess which option would work best for their operations, while providing a reasonable cutoff time to reduce administrative burden of having to assess backdated fleet compliance if a fleet owner desired to switch later in the regulation timeframe.

Language was modified to clarify that the waiver of Health and Safety Code provisions would apply to any new ICE vehicle purchased pursuant to a granted exemption specified in sections 2015.2(f)(2), 2015.2(f)(5), and 2015.2(f)(9). The originally proposed language was erroneously limited, and it was necessary to expand it to all exemptions in section 2015.2(f)(2), 2015.2(f)(5), and 2015.2(f)(9). This ensures fleets can have flexibility to retain and operate ICE vehicles purchased pursuant to an exemption for a minimum useful life that the fleet owner would have otherwise waived.

Language was added to Table A: ZEV Fleet Milestones by Milestone Group and Year to add "pickup trucks" to the list in Milestone Group 2 to conform with other modifications to the definition of Milestone Group 2, which included pickup trucks.

2. In section 2015.2(a), language was modified to clearly state that fleet owners must continuously meet or exceed the ZEV milestones percentage requirements set forth below in Table A: ZEV Fleet Milestones by Milestone Group and Year for their California fleets. This change is necessary to provide greater clarity for the requirement.

Language was modified from "ZEV milestone" to "ZEV Fleet milestone". Language was modified to clarify that vehicles must comprise at least ten percent of the California fleet each year beginning January 1, 2025, until December 31, 2027. Clarifying language "must comprise at least" was added in place of "should be calculated as at least." This change is necessary to clearly define the start and end dates of the specified time frame and prevent more than one reasonable and logical interpretation of the criteria.

3. In section 2015.2(b), language was modified from "ZEV Milestone Calculation" to "ZEV Fleet Milestone Calculation." The language "Equation 1: ZEV Fleet Milestone Equation" was added to clearly direct the example within the section.

The language "designated backup vehicles may be excluded from the vehicle count for each milestone group" was modified and moved to section 2015.2(f)(1). This

move was necessary since all the exemption and extension are explained in full detail are under one section.

4. In section 2015.2(c), language was modified from “initial ZEV fleet milestone with Zev tractors” to “total ZEV milestone requirement with ZEV day cab tractors.” This modification was necessary to clarify the example of the box trucks and day cab tractor fleet. Fleet owners may meet the ZEV milestones requirement by purchasing the total amount of ZEVs as all box trucks or all day cab tractors. This is to further clarify that any ZEVS count towards compliance.
5. In section 2015.2(d), language "for the purposes of this option" was added to establish that the additional criteria for the classification of a rental vehicle are specific to the option as they are not included in the definition of a rental vehicle.

Language was also modified to clarify that rental vehicles under contract to leave California are also in California. This change is necessary to prevent more than one reasonable and logical interpretation of the criteria and to help clarify which vehicles would need to be counted toward their California fleet.

6. In section 2015.2, a new subsection (e) was added to provide a compliance option for waste and wastewater fleets to delay compliance for certain vehicles. Applicable vehicles must be in the California fleet as of January 1, 2024, and must meet certain criteria, including being exclusively fueled with biomethane and limitations on vehicle types. Fleet owners must also meet reporting and recordkeeping requirements. The language also provides a option protecting fleet owners from losing option counts, which is discussed in more detail in the Waste and Wastewater Fleet option rationale, when replacing vehicles using the option with ZEVs, and when replacing with other combustion vehicles as long as they are exclusively fueled with biomethane.

This option is necessary to address stakeholder concerns about stranding investments made into renewable natural gas vehicles and infrastructure, as well as aligning with State policy on implementation of SB 1383 (Lara, Chapter 395, Statutes of 2016) to help reduce short lived climate pollutants, reduce total greenhouse gas emission, and reduce criteria pollutants. The Board in the October 2022 hearing for the regulation directed staff to assess providing more time for waste and wastewater fleets to use the fuel while transitioning to zero-emission vehicles, while continuing to implement strategies for capturing methane and using it in other hard to decarbonize sectors. Staff worked with stakeholders and held a workgroup meeting on the topic, from which this option was developed.

The requirement that the option is based on vehicles in the California fleet as of January 1, 2024, protects against expanding the number of RNG vehicles in the fleet and associated fueling infrastructure, which could result in stranded asset concerns as the fleets eventually transition to ZEVs.

7. In section 2015.2(e), a new subsection (1) was added to require vehicles to be exclusively fueled with biomethane. This requirement is necessary to narrow the

scope of the option to the fuel being created by waste and wastewater fleets accepting diverted organic waste. Allowing fleets to fuel with regular compressed natural gas from non-renewable sources would not align with State policies and would not help achieve reductions of short-lived climate pollutants.

8. In section 2015.2(e), a new subsection (2) was added to specify that eligible garbage vehicle configurations are rear-, side-, and front-loader compactor trucks, tractors exclusively used as transfer trucks, and roll-off trucks. This addition was necessary to notify Waste and Wastewater fleets what types of garbage vehicle configurations are eligible for the option. These vehicles were identified by stakeholders as directly involved in the collection and processing of diverted organic wastes and were therefore included. Other vehicle types may be less directly involved and were not included.
9. In section 2015.2(e), a new subsection (3) was added to specify that eligible wastewater vehicle configurations are all vehicles that directly support the operation of facilities that collect, and process diverted in-state organic waste to produce biomethane. This addition was necessary to notify wastewater fleets which vehicles are eligible for the option.

Wastewater fleets have anaerobic digestors to process organic wastes that come through their facilities and are likely recipients of organic wastes diverted as a result of SB 1383, as studies have found there is sufficient capacity at existing wastewater facilities to accept the anticipated food waste diverted from landfills. Therefore, it is necessary to include all vehicles directly supporting these facilities in the option to ensure the option is not expanded to other vehicles that are not related to processing diverted organic waste.

10. In section 2015.2(e), a new subsection (4) was added to notify fleets that each vehicle that no longer meets the criteria specified in section 2015.3(e)(1) through (3) will reduce the number of eligible vehicles from each originally designated Milestone Group by one, unless the vehicle is replaced with a ZEV or another eligible ICE vehicle that is exclusively fueled with biomethane. This addition was necessary to allow waste and wastewater fleets to replace the vehicles with ZEVs or other eligible ICE vehicles without being penalized. This also ensures fleets do not retain the option if their vehicles no longer meet the criteria.
11. In section 2015.2(e), a new subsection (5) was added to require fleet owners utilizing the option to report fleet and vehicle information as specified in sections 2015.4(c)(1)(J) and keep records as specified in section 2015.5(m). This addition was necessary to specify the reporting and recordkeeping requirements specific to these fleets.
12. In section 2015.2(e), a new subsection (6) was added to establish that for vehicles that meet the criteria, each year the count of eligible waste and wastewater fleet vehicles in Milestone Group 1 will be subtracted from the count of vehicles in Milestone Group 1 and added to Milestone Group 3. The count of eligible waste and wastewater fleet vehicles in Milestone Group 2 will be subtracted from the count of

vehicles in Milestone Group 2 and added to Milestone Group 3, as specified in section 2015.2(e). This language is necessary to ensure it is clear how many vehicles will be counted in the delayed timeline. This approach establishes the credit for existing vehicles in 2024 and simplifies how to determine how many vehicles will be counted with a delayed timeline. This approach establishes a fixed number of vehicles on the delayed schedule based on the initial snapshot of the fleet, and the number of ZEVs required each compliance year into the future remains constant if the fleet size does not change. If the fleet owner increases the total number of CNG trucks from that point or increases the number of diesel trucks in the fleet the schedule would not be extended for those vehicles and the number of ZEV required would be the same as fleets without the extension. For example, in 2027, if the fleet grows by 10 trucks that are in Group 2, they would remain in Group 2 regardless of fuel type. This means a fleet could add 9 CNG trucks and 1 ZEV by 2027. This approach would not prioritize CNG above ZEVs and would not encourage expansion of new CNG infrastructure and stranded asset concerns as CNG will ultimately need to be phased out of the fleet by 2042. Milestone Group 3 vehicles are already on the latest timeline, so there was no need to adjust the timeline for these vehicles.

Moving vehicles into Milestone Group 3 provides 3 to 6 additional years for certain vehicles to continue using biomethane for transportation in support of the State's organic waste diversion goals, while providing sufficient time for other markets for biomethane in hard to decarbonize sectors consistent with the findings of CARB's 2022 Scoping Plan update.

13. In renumbered subsection 2015.2(f)(1), language was modified to more clearly state that fleet owners may exclude designated backup vehicles from the vehicle count for each Milestone Group when determining the ZEV Milestone Calculation specified in section 2015.2(b) if it is designated as a backup vehicle as specified in section 2015.3(a).

Language was removed referring to excluding mileage accrued by a vehicle when determining if the vehicle meets the backup vehicle criteria if the vehicle is operated to support a declared emergency event. It is necessary to remove language referring to determining if a vehicle meets the backup vehicle criteria as it is already specified in section 2015.3(a)(1). More rationale about the exemption can be found later in this document under the "Backup Vehicle Exemption" in section 2015.3(a).

14. In renumbered subsection 2015.2(f)(2), language was modified to specify that fleet owners may request the exemption to purchase a new ICE vehicle and exclude it from the ZEV Milestone Calculation. This change was necessary because the originally proposed language implied fleet owners would receive an exemption without applying, and this change ensures that fleet owners are aware this exemption must be requested.

Language was also added to clarify that fleet owners must request and obtain the exemption no later than one year (365 consecutive days) before the next applicable upcoming ZEV Milestone compliance date. This is necessary to give staff sufficient time to process exemption requests and reduces administrative burden, while

ensuring fleet owners are planning sufficiently in advance for compliance with their next obligation.

Additionally, language was added to establish that the Executive Officer will grant this exemption only if the fleet owner demonstrates their next applicable upcoming ZEV Milestone cannot be reached without a granted exemption by requesting and obtaining this exemption for all other ICE vehicles in their California fleet that do not otherwise qualify for other exemptions. This addition is necessary as the ZEV Milestones Option provides fleet owners full flexibility to manage their fleet composition as they see fit as long as they meet the ZEV Milestones. This additional flexibility means the exemption would otherwise not be needed other vehicles in the California fleet can be upgraded to ZEVs. This change will reduce administrative burden by minimizing unnecessary exemption requests. More rationale about the exemption can be found later in this document under the "Daily Usage Exemption" in section 2015.3(b).

15. In renumbered subsection 2015.2(f)(3), language was modified to specify that fleet owners may request an extension to count an ICE vehicle being replaced as a ZEV when determining compliance with the ZEV Milestone Calculation specified in section 2015.2(b). This change was necessary because the originally proposed language implied fleet owners would receive an extension without applying, and this change ensures that fleet owners are aware this extension must be requested. Allowing an ICE vehicle to be replaced to be counted as a ZEV ensures the fleet owner would not be out of compliance while awaiting completion of ZEV infrastructure projects.

Clarifying language was added that specifies that fleet owners must request and obtain these extensions pursuant to the applicable criteria specified in sections 2015.3(c) no later than 45 calendar days before the next applicable upcoming ZEV Milestone compliance date specified in section 2015.2(a). The time frame selected was necessary to reduce administrative burden by minimizing unnecessary extension requests and to ensure fleet owners are taking action to apply for extensions reasonably in advance of an upcoming compliance date. Fleet owners that use this exemption would not need to await delivery of a vehicle if approved, so requiring applications be submitted no later than 45 days prior to their deadline is sufficient to provide flexibility for fleets while ensuring the Executive Officer has the maximum 45-day period to assess and respond to the request. More rationale about the extension can be found later in this document under the "Infrastructure Delay Extensions" in section 2015.3(c).

16. In renumbered subsection 2015.2(f)(4), language was modified to specify that the fleet owner may request an extension to count an ICE vehicle as a ZEV when determining compliance with the ZEV Milestone Calculation specified in section 2015.2(b). This change was necessary because the originally proposed language implied fleet owners would receive an extension without applying, and this change ensures that fleet owners are aware this exemption must be requested. Allowing an

ICE vehicle to be replaced to be counted as a ZEV ensures the fleet owner would not be out of compliance while awaiting completion of ZEV infrastructure projects.

Language was modified and moved to section 2015.3(d) that specified new ZEVs must be ordered one year in advance of the compliance date for the ICE vehicle being replaced, and that specified newly purchased ZEVs would not be delivered by the compliance deadline for reasons beyond the fleet owner's control. This change was necessary to improve the readability of the regulation by moving criteria that are common across the Model Year Schedule and ZEV Milestones Option into the common criteria area in section 2015.3.

Language was added to establish that the fleet owner must request this extension no later than February 1 of the same calendar year as the next applicable ZEV Milestone compliance date specified in section 2015.2(a). This addition is necessary to specify when fleet owners must apply for the extension. Fleet owners that are made aware that their ordered ZEV would not be delivered in time would not need the extension until they have a compliance deadline, and this language helps reduce administrative burden for processing unnecessarily early extension requests by requiring fleet owners to apply and receive the extension no later than the open reporting period in the year they are expected to be in compliance.

The fleet owner may transfer the extension to another vehicle in the fleet if the criteria specified in section 2015.3(d)(2) are met. Allowing fleet owners to transfer the extension pursuant to some criteria is necessary to provide flexibility to fleet owners in the case of a manufacturer order cancellation. More rationale about the extension can be found later in this document under the "Vehicle Delivery Delay Extension" in section 2015.3(d).

17. In renumbered section 2015.2(f)(5), language was modified from "ZEV Unavailability Exemption" to "ZEV Purchase Exemption" to conform with a change in the name of the exemption.

The language "fleet owners may purchase a new ICE vehicle and exclude it from the ZEV milestone calculation of section 2015.2 if the fleet owner can demonstrate that all the remaining ICE vehicles in the fleet that are not already using an exemption or extension cannot be replaced with a ZEV or NZEV of the needed configuration because they are not available to purchase, and the conditions of section 2015.3(e) are met" and "if the only remaining ICE vehicles in the fleet cannot be replaced with a ZEV or NZEV of the needed configuration because they are not available to purchase, and the conditions of section 2015.3(e) are met, those ICE vehicles are excluded from the ZEV milestone calculation" were modified and moved to subsections (A) and (B) as described below to improve readability of the regulation and conform with other modifications to the ZEV Purchase Exemption.

Language was added to establish that fleet owners must use the exemption in section 2015.3(e)(1) or request the exemptions of section 2015.3(e)(2). This change is necessary to specify that the fleet owner must follow the requirements of the applicable exemptions and to conform to changes to the exemption. One pathway

allows fleet owners to use the exemption without requesting it if they meet the criteria and the other requires fleet owners request Executive Officer review.

Language was added to specify fleet owners must use or request the exemption no later than one year (365 consecutive days) before the next applicable upcoming ZEV Milestone compliance date specified in section 2015.2(a). The application timeframe is necessary to specify when fleet owners may apply for the exemption. The selected application timeframe is also necessary to reduce staff burden by minimizing unnecessary exemption requests, while allowing sufficient time prior to an upcoming ZEV Milestone to place purchase orders and have enough time for a vehicle to be built. It also is necessary to ensure fleet owners are taking action to apply for exemptions reasonably in advance of an upcoming compliance date.

Additionally, language was added to establish that the Executive Officer will grant this exemption only if the fleet owner demonstrates their next applicable upcoming ZEV Milestone cannot be reached without a granted exemption by requesting and obtaining this exemption for all other ICE vehicles in their California fleet that do not otherwise qualify for other exemptions. This addition is necessary as the ZEV Milestones Option provides fleet owners full flexibility to manage their fleet composition as they see fit as long as they meet the ZEV Milestones. This additional flexibility means the exemption would otherwise not be needed other vehicles in the California fleet can be upgraded to ZEVs. This change will reduce administrative burden by minimizing unnecessary exemption requests. More rationale about the exemption can be found later in this document under the "ZEV Purchase Exemptions" in section 2015.3(e).

18. In renumbered section 2015.2(f)(5), a new subsection (A) was added to establish that fleet owners shall receive an exemption to purchase a new ICE vehicle and exclude it from the ZEV Milestone Calculation specified in section 2015.2(b) pursuant to the criteria specified in section 2015.3(e)(1). This addition is necessary to specify the requirements that the replacement ICE vehicle shall be exempt from and to establish the criteria that must be met to qualify for the exemption.
19. In renumbered section 2015.2(f)(5), a new subsection (B) was added to establish that fleet owners may request and obtain an exemption to purchase a new ICE vehicle and exclude it from the ZEV Milestone Calculation specified in section 2015.2(b) pursuant to the criteria specified in section 2015.3(e)(2). This addition is necessary to specify the requirements that the replacement ICE vehicle shall be exempt from and to establish the criteria that must be met to qualify for the exemption.
20. In renumbered section 2015.2(f)(6), language was modified from "Exemptions Pursuant to Declared Emergency Events" to "Declared Emergency Response." Language was modified to specify that fleet owners may exclude vehicles performing emergency operations from the ZEV Milestones requirements during an emergency event pursuant to the criteria specified in section 2015.3(f)(1). This is necessary to specify which vehicles would be eligible and from which requirements they would be exempt.

21. In renumbered section 2015.2(f), a new subsection (7) was added for “Mutual Aid Assistance” to specify that fleet owners may request an exemption to purchase new ICE vehicles and exclude them from the ZEV Milestone Calculations. This addition is necessary to specify the requirements that the new ICE vehicle shall be exempt from.

Language was moved referencing the 25 percent fleet cap to the Mutual Aid Assistance exemption later in the regulation. This change was necessary to improve the readability of the regulation by moving criteria that are common across the Model Year Schedule and ZEV Milestones Option into the common criteria area in section 2015.3.

Language was added specifying that fleet owners must request and obtain an exemption pursuant to the exemption criteria specified in section 2015.3(f)(2). This addition is necessary to establish the criteria that must be met to qualify for the exemption.

Language was added specifying ICE vehicles purchased pursuant to a granted exemption may operate as part of the regular California fleet and are not restricted solely to mutual aid functions. This change was made in response to stakeholder concerns that the language could be interpreted as requiring vehicles purchased pursuant to the exemption to only be used for mutual aid. This change ensures there is only one logical and reasonable interpretation that there is no such restriction.

More rationale about the exemption can be found later in this document under the “Mutual Aid Assistance” exemption in section 2015.3(f)(2).

22. In renumbered section 2015.2(f), a new subsection (8) was added for the “Five-day Pass” that allows a fleet owner to report to claim a five-day pass to exclude a vehicle from the California fleet for five consecutive days once per calendar year per vehicle in their fleet pursuant to the criteria specified in section 2015.3(g). This addition was necessary to specify when fleet owners may apply for the pass, and for how long the pass could be granted. It is necessary to limit passes to one pass per vehicle from the California fleet per calendar year to prevent a loophole by which fleet owners could continually apply for passes to effectively exempt themselves from the regulation indefinitely. The intent of the exemption is to address a vehicle that might have to be brought in from out of state for a short period. More rationale about the exemption can be found later in this document under the “Five-Day Pass” exemption in section 2015.3(g).

23. In renumbered section 2015.2(f), a new subsection (9) was added for “Intermittent Snow Removal Vehicles” outlining how fleets can receive exemptions to exclude designated intermittent snow removal vehicles from the ZEV Milestone Calculation specified in section 2015.2(b) until January 1, 2030. This addition is necessary to specify what this exemption allows and which intermittent snow removal vehicles are eligible for this exemption. This exemption is necessary to give fleets with these vehicles flexibility to not have to include the vehicles in the fleet size when determining the amount of ZEVs a fleet needs to meet its ZEV Milestone obligation for six years. January 1, 2030 was selected as the cutoff because more ZEV models

are coming on the market every year, and staff expect that improvements to the technology by then will bring intermittent snow removal ZEVs to market. These vehicles have unique duty cycles that may be more challenging to electrify in the near-term. Additionally, they are multi-purpose vehicles, typically operated by public fleets with a mandate to remove snow from roadways and are repurposed after the snow season to perform other public services. Executive Officer review is necessary to ensure that only vehicles meeting the definition are included.

(D) Section 2015.3

1. In section 2015.3(a), language was changed to clarify that criteria used to determine whether a backup ICE vehicle can be operated is listed in the same section, the definition of "backup vehicle" was removed, and "immediately stop being operated" was replaced with "cannot be operated" because fleet owners are not allowed to operate the backup vehicle in California once the vehicle no longer meets the criteria specified in this section. Language was also added to specify that the reporting period referenced is the March reporting period as specified in section 2015.4(b); this is necessary to specify to which reporting period the language was previously referring.
2. In section 2015.3(b), language was removed that required ICE vehicles operating under the Daily Usage Exemption to have a GVWR above 14,000 lb. to meet Board direction to streamline criteria for the regulation's flexibilities and to allow Class 2b-3 vehicles to be eligible for this exemption. Language was modified throughout this section and its subsections to delineate between battery-electric vehicles and fuel cell electric vehicles to improve the readability of the regulation, and to ensure there is only one reasonable and logical interpretation of the requirements. This change is necessary because the language previously indicated the exemption applied to "ZEVs", but the exemption explicitly excludes fleet owners from applying if a fuel cell electric vehicle is available. This could have led to confusion about which type of vehicle the exemption would apply to; this change ensures only one reasonable and logical interpretation. Language was also added to let fleet owners know the time duration for this exemption to purchase a new ICE vehicle of the same configuration is 180 calendar days for fleet owners, and one year (365 consecutive days) for government fleet owners. This language was moved from earlier in the regulation language to this section because it is a common criterion for both compliance pathways and was made to improve the readability of the regulation. This change is necessary to recognize public fleet bid processes to purchase new vehicles may necessitate additional time. Language was added to refer a fleet owner to other sections in the regulation that explain the action the fleet is requesting an extension for, e.g., ZEV Addition requirement for fleet owners complying with the Model Year schedule, and the action to purchase a new ICE vehicle and exclude from calculations for fleet owners who have opted to comply with the Milestone schedule. This is necessary to link to the action the fleet owner is requesting an extension for, to the appropriate compliance schedule and criteria established in this section. "New" was added in front of "ICE vehicle" because it was erroneously omitted from

the original proposal and is necessary to ensure the ICE vehicle purchased by the fleet owner under this exemption has the best emissions controls possible. Language was added to require fleet owners to first check to make sure there is a ZEV available in the same weight class and with the same configuration as the ICE vehicle that needs to be replaced, then to show by demonstrating the daily usage needs for the remaining ICE vehicles in their fleet cannot be met by the available ZEVs. Language specifying that "fleet owners may not apply" was modified to "The Executive Officer will not approve exemption requests" to conform with other modifications in the regulation where the Executive Officer may make such determinations, while allowing the fleet owner to apply. Language was added to specify the exemption would not be approved for an available Class 2b or 3 BEV with a rated energy capacity of at least 150 kilowatt-hours. This change is necessary to conform with changes made to remove the GVWR limitation, and to ensure there is a sunset when vehicles with an equivalent of around 250 mile range (based on a selected 0.6 kilowatt-hour per mile efficiency as described in the rationale for section 2015.3(b)(3)). It is necessary to apply limitations to the exemption for when ZEVs are commercially available with rated energy capacities that would meet most fleet needs. 250 miles is more than enough range for most fleet needs according to the one-time reporting data collect from affected fleets. When ZEVs are available with these ranges, the exemption would no longer be needed. The language, "in granting or denying the exemption request" was added to qualify the existing language "Executive Officer will rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria specified in section 2015.3(b)" that was moved to a new subsection (6) at the end of the section.

3. In section 2015.3(b)(3), reference was added to ensure the comparable ZEV range identified in the previous section (2) is the same as that used to calculate the equivalent ICE vehicle daily energy needs. Language was added to specify that Class 2b-3 vehicles would use a conversion factor of 0.6 kilowatt-hours per mile. The factor was established from in-use and dynamometer data across a wide range of vehicle types and classes in the report "Battery Electric Truck and Bus Energy Efficiency Compared to Conventional Diesel Vehicles", which is available with hyperlink in the rationale for the Advanced Clean Fleets Initial Statement of Reasons. These factors rely on the same source data as the factors used in CARB's cost analysis for this staff report but are slightly different due to simplification needed for the cost analysis. The calculations and results are necessary to submit so CARB can assess them and ensure calculations were performed correctly. Previous subsection (6) was moved to subsection (3)(A), and language was changed from "Optionally substantiate their exemption request by submitting" to "in lieu of calculating range as specified in section 2015.3(b)(3)", to inform a fleet owner that the actual data measurements submitted under this subsection are used as criteria instead of the range calculations in section (3). Also, language was removed referencing vehicle energy use data being submitted from a vehicle "in the fleet's service" in response to stakeholder concerns about not being able to submit demonstration vehicle data from a ZEV manufacturer to substantiate Daily Usage Exemption requests. This change provides

also provides additional flexibility for fleet owners to use data from ZEVs purchased by other fleets to substantiate daily energy use. This change was also made in response to the Board's direction to streamline the exemption processes and criteria. Language was added to include the vehicle miles travelled per day because it was erroneously excluded from the original proposal and is needed as criteria under this exemption. Additionally, language was modified from requiring one month of data, to requiring five consecutive business days of data. The modification to the timeframe of data required is necessary to reduce the burden of data collection on fleet owners, and time needed by staff when evaluating if the information submitted by the fleet owners meets the exemption criteria. Finally, language was added to require energy used to drive the vehicle, and language was added to require energy used while stationary plus operating hours for vehicles that operate truck mounted or integrated equipment while stationary. These changes are necessary to ensure staff will have sufficient information to compare the energy use of truck equipment, often operated while a combustion vehicle's engine is idling to engage a power take-off unit, to the energy use submitted for ZEVs on similar daily assignments.

4. In section 2015.3(b)(4), "industry accepted" was deleted and was replaced with "data collection system that tracks daily mileage and energy use, and hours of vehicle operation if applicable", i.e., an explanation of telemetry data equivalence. Language "and energy used to drive" was added to ensure that driving energy could be compared to auxiliary equipment that uses power in the daily usage reports. Language "ICE" and "of the same weight class and configuration of the vehicle to be replaced" was added to ensure the fleet owners are submitting the daily usage report for the ICE vehicle they are requesting the exemption for. Lastly, the word "either" and "or the energy use data submitted per section 2015.3(b)(3)(A)" was added to make it clear to a fleet owner that the ICE vehicle daily usage report is compared to the equivalent, available ZEV calculated energy capacity converted to miles (3) or measured data (3)(A), but not both. Subpart (A) was modified by replacing the less specific language, "daily equipment usage information such as hours of operation" with "the energy used while stationary and number of hours such truck mounted or integrated equipment is operated each day, for at least 30 consecutive workdays from within the last 12 months" to be sure the auxiliary equipment data usage report includes the number of hours the equipment is operated each day within the data collection time frame identified in (4). This data is needed to compare to the ZEV data submitted in subsection section (3)(A). Language was added at the direction of the Board and to address stakeholder concerns allowing fleet owners that have a mutual aid agreement to send vehicles to assist other entities during a declared emergency event to alternatively submit this report from within the last 60 months. This change recognizes that not all emergency conditions are the same in every year, and that certain emergencies may necessitate longer range needs. Stakeholders indicated that they spec their vehicles for the worst-case scenarios, and this change allows them to pick a timeframe from anywhere within the last 5 years to recognize this. However, staff still will require the top 3 values be thrown out to ensure that the fleets are making progress towards

their electrification goals and obligations, and to recognize that even in emergency situations, fleet owners are expected to adjust their fleet management to accommodate ZEVs in the fleet. Additionally, the mutual aid exemption already allows up to a quarter of the fleet to be retained as ICE vehicles for the purpose of these worst-case response scenarios, and not throwing out the outliers would effectively create a loophole by which fleet owners could always pick the worst case scenario to justify an exemption.

5. In section 2015.3(b)(5), language was modified to add "Submit", change "vehicle types" to "vehicle configurations", change "commercially available ZEVs" to "BEVs available to purchase", and "ZEV charging or fueling" to "ZEV fueling infrastructure". These changes are necessary to conform with other modifications made to the regulation language and improve readability and internal consistency of the language. The change from "commercially available ZEVs" to "BEVs available to purchase" was necessary to conform with changes to the Daily Usage exemption, as explained in the rationale for section 2015.3(b) in this document.
6. In section 2015.3(b)(6), language was modified and moved from section 2015.3(b) to subsection (6) specifying that "In granting or denying the exemption request, the Executive Officer will rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria specified in section 2015.3(b)". This change is necessary to conform with other changes to the regulation exemption where the Executive Officer's determination was moved to the end of the exemption section to improve readability and flow of the language. The necessity of the original inclusion is described in the Advanced Clean Fleets Initial Statement of Reasons.
7. In section 2015.3(c), language was modified to introduce the infrastructure delay extensions which includes construction delays and was expanded to also include site electrification delays. Language was added to refer a fleet owner to other sections in the regulation that explain the action the fleet owner must take to request extensions. This is necessary to link to the action the fleet owner is requesting an extension for, to the appropriate compliance schedule, and criteria established in this section. Clarifying language, "due to circumstances" was added because it was erroneously omitted. Language, "Fleet owners may only apply for the following extensions for ICE vehicles being replaced at the site experiencing the delay" was added to clarify the extension may only apply vehicles that need to be replaced by ZEVs at the site experiencing the delay. This should limit the extension requests to those vehicles associated with the site being upgraded. Language was added extending this extension to fleets who have entered into a contract of one year or longer to charge or fuel their ZEVs at a single location prior to beginning the infrastructure project. This was added in response to stakeholder concerns that third-party offerings including "infrastructure as a service" would not be eligible for this extension. The language added clarifies that a fleet who has contracted for infrastructure installation regardless of whether the equipment is leased or owned is still eligible to apply for these extensions. This section also adds language to inform fleet owners that they must apply for this extension "at least 45 calendar days prior

to the next applicable compliance date for CARB to consider the request". This is necessary to establish a reasonable time period for staff to consider a complete extension application before the next compliance date where staff must respond within 45 days of complete request being filed.

8. In section 2015.3(c)(1), clarifying language, "due to circumstances" was added because it was erroneously omitted. In addition, the timeframe of this extension was extended from one year to up to two years and the language, "beginning on the applicable compliance date for the number of vehicles that qualify for the extension" was added to clarify the extension would start on the compliance date that was used to qualify for the extension. The additional time is necessary to meet Board direction to provide more time for infrastructure development and clarification on when the extension would start is necessary to avoid confusion. Finally, the language, "The Executive Officer will grant a single extension per project to delay the vehicle delivery for one year if they determine the fleet owner satisfies the criteria for the delay, based on the information submitted below and the exercise of good engineering judgment" was moved to a new section (E) which follows the time sequence of steps for the Executive Officer's determination.
9. In section 2015.3(c)(1)(A), language specifying supporting documentation used to substantiate their request for a construction-related delay was added. The fleet owner's construction permit issuance date must be at least one year before the next applicable compliance date for the fleet owner to be eligible for the extension. This change is necessary to ensure documentation submitted by the fleet to apply for this extension has specific information that can be used to determine their eligibility.
10. In section 2015.3(c)(1)(B), the language "that occurred after" was added to clarify that circumstances beyond the fleet owner's control had to have occurred after the construction permit was issued and the above section (A) is now referenced to let a fleet owner know of the timeline for establishing eligibility. Language "delay in manufacture and shipment of zero-emission charging and fueling infrastructure equipment" was added as a new criterion to justify circumstances outside fleet owners' control during the infrastructure construction project. This change is necessary to meet Board direction to provide additional time for infrastructure development, to align with CARB's other Zero-Emission technology regulations, and in response to stakeholder concerns about recent supply chain constraints and unforeseen issues related to obtaining necessary equipment critical to ZEV deployments. Additional language was added to clearly state "delays due to unexpected safety issues" must be "on the project." This is necessary to qualify the safety issues must be related to activities conducted at the construction project site, not those from traveling to or from the project site or those unrelated to the construction project itself. Finally, "ZEV fueling" was added to qualify the term infrastructure for clarity.
11. In section 2015.3(c)(1)(C), the language "ZEV fueling" was added to qualify the term infrastructure. This change is necessary to ensure there is only one reasonable and logical interpretation of the criteria.

12. In section 2015.3(c)(1), language was moved from 2015.3(c)(1) to a new section (E) which follows the time sequence of steps for the Executive Officer's determination. This language is necessary to explain the process used by the Executive Officer in making their determination which was modified to remove the 1-year duration because it is discussed in (A). Finally, the vehicle delivery delay was deleted because it is a separate extension that is used by a fleet owner for another reason besides infrastructure construction delays.
13. In new section 2015.3(c)(2), language was added to create a new "ZEV Infrastructure Site Electrification Delay" extension that allows a fleet to remain in compliance while experiencing a delay in obtaining power from a utility before their project construction project begins. The original "Infrastructure Construction Delay Extension" language in section 2015.3(c)(1) also includes a "delay in obtaining power from a utility" as an eligible criterion to extend compliance deadlines, but that is after construction begins. This new extension was added in response to stakeholder concerns that some requests for site power may require utility service upgrades that would delay the start of their construction, and Board direction to address these concerns. Language was added to sunset this extension on January 1, 2030, which is reasonable because this date is at least six years after the effective date of this regulation and when staff expect most infrastructure construction projects should have already been initiated and planned out for several years. Therefore by 2030, utilities should be aware of most locations where site upgrades would be needed. The extension would apply to delays in power needed for charging equipment and electrolyzers used in the production of hydrogen. The modifications were needed to recognize fleet's acting in good faith who are met with circumstances beyond their control when requesting upgraded or new electricity service from a utility. This addition is necessary to balance Board direction to provide more time for infrastructure delays if they occur while maximizing the ACF regulation's goals.
14. In new section 2015.3(c)(2)(A), language was added to specify the time period for eligibility under the new site electrification delay language. Language was added to let fleet owners know the length of the initial extension is based on the utility information and can be up to three years. Language was added to let the fleet owners know the time period for which the extension starts. Language was added to let a fleet owner who was granted an initial three-year extension, know they can request an additional two years, thereby allowing this extension to extend for as long as five years. Additional language was added to let a fleet owner know that to renew their initial extension, they must submit updated supporting documentation at least 45 calendar days prior to the expiration of their initial, granted extension. 45-days was selected as a reasonable amount of time for a fleet owner to apply for a renewal and is consistent with the time for staff to review the request. The language was added to ensure the fleet owner knows the renewal request requires they submit new, additional or updated information from the utility substantiating their on-going delay in obtaining site power before the initial three-year extension expires.

15. In new section 2015.3(c)(2)(B), “Number of Vehicle Extensions” language was added that describes CARB’s process for determining the number of extensions the fleet owner may request, based on information submitted in subsection (C). Compliance with the regulation is determined by the composition of ZEVs in the fleet or vehicles that would be replaced with ZEVs. This section informs a fleet owner they may request this extension only for the number of ZEVs and associated charging or fueling equipment that the utility is unable to supply sufficient power. Language was added to inform a fleet owner that the extension will be approved for the number of ZEVs that cannot be supported and the fleet owner must deploy the maximum number of ZEVs that can be supported through each year of the requested delay. Additionally, the information requested would need to be provided by year to ensure it is consistent with compliance requirements, and to define the duration of the extension.
16. In new section 2015.3(c)(2)(C), language was added letting a fleet owner know what information to submit and the email address to submit it. The information (1) is a copy of the application to the utility requiring site electrification that is consistent with the number of ZEVs the fleet owner must deploy each calendar year to meet their compliance requirements during the requested extension period, and (2) the utility’s response showing that the project will take longer than a year were added to leverage information that is already being shared between a fleet and the utility as part of their site electrification agreement. These two pieces of information establish the need for the delay. It is necessary that the fleet owner’s application be for service that is consistent with the number of ZEVs the fleet owner must deploy to meet their obligation to ensure the application process is not gamed if a fleet owner were to ask for service for many more vehicles than they actually need to comply, and thus artificially inflate the time it would take a utility to serve that need. Language was also added to give a fleet owner flexibility if a utility is unable or unwilling to execute a contract to move forward with a project, to instead submit the initial application to the utility requesting site electrification and a signed attestation from the utility stating they will proceed with the project. The executed contract between the utility and the fleet or signed attestation is proof that the infrastructure project will proceed. The reason these documents are requested besides providing important information for (4), is they provide assurance the project will proceed and when it can be built out. The supporting documentation under (3) is to get an estimated completion date even if the estimated completion date could be on supporting documentation already discussed, such as the initial or executed contract, or application for site power, as the estimated completion date may have shifted based on information from the utility. Language was added to specify that documentation includes an estimate of the amount of electrical capacity in kilowatts the utility can supply to the site within one year of the extension request, and for each year of the requested delay to ensure staff would have sufficient information to assess how many ZEVs could be deployed and how many extensions would be warranted in the case of such a delay. In addition, language was added requesting the fleet owner to submit the reason for the delay. This reason this is included is to provide more

information as to what could be causing the delay in obtaining grid power from the utility.

Language was added to require information about the ZEV fueling infrastructure equipment the fleet owner can install consistent with the utility's capacity estimate and the associated number, configuration, and weight class of the ZEVs that can be supported by such equipment within one year of the extension request, and for each year of the requested extension. The number, type, and rated capacity for chargers in kilowatts, and for hydrogen stations, dispensing capacity in kilograms per day and the electrical demand in kilowatts are also required. This language was added to clarify that the documentation provided in (1) must have this information as this is what staff will use to determine compliance with the regulation depending on what schedule the fleet is following (model year or milestone). Language was added in (5) to let fleet owners with multiple sites where vehicles are domiciled know they must submit a copy of each site's infrastructure capacity evaluation from the utility or a third-party licensed professional electrical engineer with the information required to be submitted in subsections (3.) and (4.). This initial site capacity assessment could also be the same information provided in the initial or executed contract, or application with the utility used as supporting evidence in the application, or it could be done as a preliminary evaluation by the utility or a third-party licensed professional electrical engineer. Flexibility to submit preliminary site infrastructure capacity evaluations from a licensed professional electrical engineer was added to give a fleet owner control over the process, however the person performing site capacity load calculations must be qualified and licensed to perform the work. This language was added to ensure the fleet needs the extension, i.e., the fleet owner does not have enough existing capacity at their other sites to meet their applicable compliance dates.

17. In new section 2015.3(c)(2)(D), Language was added to inform a fleet owner that the Executive Officer will grant an extension for the time-period specified in section (A) and number of vehicles specified in (B) if they determine the fleet owner satisfies the criteria for the delay, based on the information submitted in (C), and the exercise of good engineering judgment language was added to inform the fleet owner the Executive Officer's determination is based on engineering and submitted information.
18. In section 2015.3(d), regarding the vehicle delivery delay the language was modified to remove any reference to NZEVs. This change is a necessary conforming modification as the regulation already establishes when an NZEV is equivalent to a ZEV. Therefore, only the term ZEV is necessary. Language fleet owners must qualify for this extension by meeting the criteria specified in the Model Year Schedule and ZEV Milestones Option sections, which is necessary to point fleet owners to the criteria specific to those options and language that describes how this option interacts with their chosen compliance path. Language was added to establish that the extension would be granted until an ordered ZEV is received. Qualifying language specifies the ZEV order must have been placed at least one year before the

next applicable compliance date then the fleet owner is directed to section 2015.3(d)(1)(B) to where the supporting documents are described in detail. Lastly, language was added to specify the extension is for ZEV that cannot be delivered by the next application compliance date.

19. In section 2015.3(d)(1), language was added referring fleet owners to the other section in the regulation that states when the reporting period is. This change is necessary to link the action the fleet owner is requesting to the reporting period that the request must be completed in.
20. In section 2015.3(d)(1)(A), the language was modified to remove any reference to NZEVs. This change is a necessary conforming modification as the regulation already establishes when an NZEV is equivalent to a ZEV. Therefore, only the term ZEV is necessary. The regulation text was improved by removing extraneous words and language was deleted to account for the new ICE vehicle replacement option.
21. In section 2015.3(d)(1)(B), the language was modified to remove criteria necessary to apply for the Vehicle Delivery Delay Extension. This is necessary as this language is duplicative of language in the following subsections. In addition, the language was modified to remove any reference to NZEVs. This change is a necessary conforming modification as the regulation already establishes when an NZEV is equivalent to a ZEV. Therefore, only the term ZEV is necessary.
22. In section 2015.3(d)(1)(B)(1), the language was modified to not be redundant stating the purchase agreement must be dated at least one year in advance. This change is necessary to have language that is clear and concise. The term "fleet owner" replaces "ultimate purchaser" to clarify the fleet owner is the person taking action to purchase the ZEV and the same person who is also requesting the extension.
23. In section 2015.3(d)(1)(B)(2), the language was removed stating that the purchase agreement of a ZEV or zero-emission powertrain conversion is what would qualify for the vehicle delivery delay extension. This change is necessary because only a purchase of a new ZEV is what would qualify as compliant for the regulation, and because the definition of "vehicle purchase" already includes converting a vehicle to zero-emissions.
24. In section 2015.3(d)(1)(B), a new section (3) was added stating the purchase agreement must show the ZEV was ordered one year prior to the next upcoming regulatory deadline, or that the order was placed on or before this regulation's effective date. This change is necessary to show fleets that have taken action to order ZEVs at least a year before their next compliance date which is a reasonable amount of time to plan ahead. The effective date language is necessary to avoid using criteria that would require action prior to the regulation's effective date.
25. In section 2015.3(d)(2), the language was modified to allow fleet owners up to 180 days, and a full year (365 consecutive days) for government fleet owners, to enter into a new purchase agreement under the vehicle delivery delay extension if the manufacturer cancels the purchase agreement for reasons outside of the fleet

owners' control. This change is necessary to provide fleets sufficient time to enter into a new purchase agreement if a manufacturer cancels an order as this is considered circumstance outside of the fleet owner's control. It also recognizes that the public fleet bid process may necessitate additional time.

Language was also modified to require the fleet owner submit to TRUCRS@arb.ca.gov the manufacturer cancellation notice within 30 days of the cancellation, and the new purchase order for ZEVs within 30 days of placing the order to maintain compliance. This change is necessary to ensure staff have sufficient documentation to prove that the manufacturer cancelled the order for circumstances outside of the fleet owner's control, and that the fleet owner has secured another purchase order for ZEVs within reasonable timeframes that allow the fleet flexibility to have a full month to report the change to CARB while ensuring staff are made aware of the change to effectively implement the exemption.

In addition, language was added stating that if no ZEV is available, the fleet owner may apply for the ZEV Purchase Exemption. This change is necessary to direct the fleet owner to the appropriate exemption that would cover their new circumstance should it occur.

26. In section 2015.3(d)(4), language was added to let a fleet owner know the Executive Officer will be granting the exemption request and will need to rely on the information submitted by the applicant and utilize their good engineering judgement to determine whether the information meets the criteria in section 2015.3(d).
27. In section 2015.3(e), language was modified from "ZEV Unavailability Exemption" to "ZEV Purchase Exemption" based on comments from stakeholders. Language was modified to establish that fleet owners may request exemption(s) either under the ZEV Purchase Exemption List or the ZEV Purchase Exemption Application if a needed ZEV or NZEV configuration is not available to purchase. This is necessary to refer to the action the fleet owner is requesting an exemption for, the appropriate compliance schedule, and the criteria established in this section. Language referring to the Executive Officer maintaining a list of unavailable vehicle configurations and the vehicle configurations excluded from this list was modified and moved to section 2015.3(e)(1). Additionally, language was modified throughout section 2015.3(e) and its subsections to specify that the exemption applies to both ZEVs and NZEVs. This addition is necessary to clarify the requirement that the exemption applies to both ZEVs and NZEVs, and that fleet owners would not be granted exemptions to purchase ICE vehicles if either a ZEV or NZEV are available to purchase in the needed configurations. Because NZEVs count the same as ZEVs for purposes of the regulation, this addition was necessary to clarify that for this exemption, a delineation needs to be made.
28. In section 2015.3(e), a new subsection (1) was added to introduce this exemption as the "ZEV Purchase Exemption List". Language was added to establish that the list will specify vehicle configurations not available for purchase as a ZEV or NZEV, and the date the exemption would expire for listed configurations determined to be

available as specified in section 2015.3(d)(2)(G). It is necessary to specify what information the list will contain, and that it would include an expiration date of the extension so fleet owners would have sufficient notice when a vehicle would be removed from the list to plan their purchases and infrastructure. The list will be maintained on the CARB Advanced Clean Fleets webpage and established no later than January 1, 2025. This streamlined approach and specified posting date was added in response to stakeholder comments. It is necessary and reasonable to clarify a date in which fleet owners can anticipate the posting of the list. January 1, 2025, was selected because applications to comply with the first 2025 compliance dates for replacing vehicles will be coming in during 2024, and this information will help the Executive Officer to populate the list. This will save time and investment for fleet owners applying for the extension in the future. The URL for the CARB Advanced Clean Fleets webpage was added for completeness and specificity. Language was added to specify that configurations on the list would include those specified in subsection 2015.3(d)(1)(A). Language was added to specify that the Executive Officer will rely on the information submitted and gathered in subsection (2) and utilize their good engineering and business judgement to determine if the information establishes that the criteria in subsections (C) through (G) are met in determining whether to add or remove a vehicle configuration from the list or to identify the expiration date for a vehicle configuration on the list. This addition is necessary because CARB needs to analyze the given information to determine the availability status of a vehicle configuration. Language was modified to add that the list would not include any buses because they are widely available as ZEVs. Any fleet specific needs like luggage compartments on motorcoaches could be evaluated based on a fleet-specific exemption process. More rationale for excluding other bus types can be found in the Advanced Clean Fleets Initial Statement of Reasons.

Finally, language was removed to allow for configurations that may not be available for purchase as a ZEV or NZEV with a GVWR less than 14,001 lbs. from the list. This change is necessary to meet Board direction to address potential unique situations where Class 2b-3 vehicles may not be available as ZEVs or NZEV in configuration needed.

29. In section 2015.3(e), a new subsection (1)(A) was added to specify the vehicle configurations that would be listed. These vehicle configurations were determined to be the most common body types of the vehicles reported in the Large Entity Reporting, available at https://ww2.arb.ca.gov/sites/default/files/2022-02/Large_Entity_Reporting_Aggregated_Data_ADA.pdf, which is explained in more detail in staff's Initial Statement of Reasons for the Advanced Clean Fleets rulemaking. This list was adjusted to remove vehicle configurations that are widely available as ZEVs.
30. In section 2015.3(e), a new subsection (2) was added to introduce the "ZEV Purchase Exemption Application" process in which fleet owners may request an exemption to purchase a new ICE vehicle of the same configuration as an ICE vehicle being replaced. This addition is necessary to accommodate more fleet-specific situations in which an available ZEV or NZEV does not meet the fleet's needs. Requiring that the

new ICE vehicle be of the same configuration as the one being replaced is necessary because it would be unreasonable for a fleet owner to purchase a new ICE vehicle of a different configuration as the point of the exemption is to accommodate fleets when a ZEV or NZEV of a needed vehicle configuration is not available for purchase. Language was also added to let fleet owners know the time duration for this exemption to purchase a new ICE vehicle of the same configuration is 180 calendar days, and one year (365 consecutive days) for government fleet owners. This language was moved from earlier in the regulation language to this section because it is a common criterion for both compliance pathways and was made to improve the readability of the regulation. This change is necessary to recognize public fleet bid processes may necessitate additional time.

The fleet owner must submit the applicable information to TRUCRS@arb.ca.gov. This addition is necessary for fleet owners to understand where to submit their application. Language was added to specify that the Executive Officer will rely on the information submitted and gathered in subsection (2) and utilize their good engineering and business judgement to determine if the information establishes that the criteria in subsections (C) through (G) are met. This addition is necessary because CARB needs to analyze the given information to determine the availability status of a vehicle configuration.

31. In section 2015.3(e)(2), a new subsection (A) was added to list the information about vehicle configuration needed by the fleet owner. This addition is necessary so fleet owners obtain the required documentation to qualify for the exemption. Subsection (1) was added to specify that the make, model, weight class, configuration, and whether the vehicle has a crew cab, cabover, or all-wheel drive must be submitted for exemption consideration. These items are common configurations and will have basic information about the types of chassis that may be suitable to be equipped with the needed body. This change is necessary to clarify the vehicle configuration details of the existing ICE vehicle to be replaced. The qualifiers, "clear and legible" and "of the entire left and right sides of the vehicle with doors closed showing the vehicle's body configuration" was added to qualify the condition and types of photographs that would meet the criteria staff could use to verify the existing vehicle's configuration. Clear and legible photos showing both sides of the existing vehicle are required to verify the vehicle configuration details for the existing ICE vehicle to be replaced. Subsection (2) was added to include a list of any frame attachments other than the body itself necessary to support or perform the primary intended function of the vehicle. This addition is necessary to account for machinery integrated to the chassis or primary vehicle body configuration that provides the connection and working parts necessary for the body to function as an integrated whole. Language was added to provide some examples of frame attachments, such as include rail wheels and stabilizing outriggers.

Language was moved from a previous subsection to include “the make and model of the body equipped on the vehicle, if applicable” in subsection (3) as it is one of the components of a vehicle’s configuration.

32. In section 2015.3(e)(2)(B), language was added to require fleet owners to submit documentation from two or more manufacturers that offer ZEV or NZEV chassis or complete ZEVs or NZEVs that states the manufacturer does not offer for sale ZEV or NZEV chassis or complete ZEVs or NZEVs of the needed configuration. This was added as a first step to ensure the ZEV or NZEV is not available for purchase by requiring the fleet owner to communicate their need for the vehicle configuration to an existing ZEV or NZEV manufacturer. Two or more manufacturers is necessary to specify to ensure there is some competition in the nascent market. The language “if there are no manufacturers offering ZEV or NZEV chassis, the statements can come from other vehicle manufacturers” was added to provide an avenue for fleet owners to communicate their needs to existing ICE vehicle manufacturers. This was added to help facilitate the transition to ZEV or NZEV for some of the smaller, niche markets that may need more time to develop.
33. In section 2015.3(e)(2), new subsection (C) was added to specify the Executive Officer’s process used to determine whether the ICE vehicle of the needed configuration is available as a ZEV or NZEV. The language “after receiving a complete submission” is necessary to consider the possibility of a fleet owner applying with incomplete or missing information as described in subsections (A) and (B). Language was added to list the many sources of information the Executive Officer will rely on in making their determination. Information would be gathered from fleet owners or manufacturers, including information gathered to comply with other CARB-administered programs, manufacturer websites, manufacturer documentation, and from authorized dealers, as well as CARB-issued Executive Orders. This addition is necessary for transparency as the Executive Officer is to rely on sources external to information submitted by fleet owners to ensure the availability status of a vehicle configuration.

Language was added to inform a fleet owner that the Executive Officer will use their good engineering and business judgement to determine whether the configuration is available for purchase as a ZEV or NZEV from any manufacturer. It is necessary to allow the Executive Officer and their good engineering and business judgement to assess the availability of a vehicle configuration because CARB needs to analyze submitted information and data to determine whether the exemption criteria have been met and that the data provided is applicable to the vehicle configuration and weight class for which the exemption is being sought. Furthermore, in making this determination, engineering judgement will be applied to determine whether the identified body submitted in subsection (A)(3) or a body from another manufacturer can be installed on the offered ZEV or NZEV and perform the same primary intended function. This is necessary to ensure whether the vehicle configuration is available by

verifying that an available ZEV or NZEV chassis can or cannot be upfitted with the needed body.

An additional public process was identified to allow the Executive Officer to solicit feedback from vehicle manufacturers and authorized dealers regarding the information submitted by the fleet owner on the CARB Advanced Clean Fleets webpage. The public process is modeled from many of CARB's existing fleet rules such as the Zero-Emissions Airport Shuttle Bus Regulation. A public process provides transparency, and a decision-making process that should result in a broader audience therefore more opportunities to build the niche markets needed for a full transition to ZEVs. Finally, the website URL was provided to direct a fleet owner to where the solicitations would be published and for completeness.

34. In section 2015.3(e)(2), new subsection (D) was added to specify the criteria used by the Executive Officer in determining whether a ZEV or NZEV is available to purchase. This was added in response to stakeholder concerns that it was missing from the original proposal. All the criteria in subsection (1) through (5) are required to be met before the Executive Officer will consider a ZEV or NZEV available.

New subsection (1) was added to specify that the manufacturer must certify the ZEV's powertrain with CARB in accordance with the "California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains," (ZEP certification) as adopted June 27, 2019. Staff expects nearly all manufacturers to meet the ZEP Certification requirements by the 2024 model year as this is necessary to earn credits in the ACT regulation and to enroll in CARB programs such as HVIP. New startup or niche manufacturers may not meet the ZEP certification requirements if they are classified as small manufacturers not regulated in the ACT regulation. This change was made in response to stakeholder concerns and provides assurance that manufacturers will produce ZEVs that meet minimum reliability requirements and make key information available to fleet owners.

New subsection (2) was added to specify that a ZEV or NZEV must have a model year 18 months or less from the date the fleet owner submitted the complete exemption request. This change is necessary to ensure timely delivery and deployment of a purchased ZEV or NZEV in the fleet.

New subsection (3) was added to specify that ZEV or NZEV configurations not solely for demonstration, test, or experimental purposes are considered available for purchase. This was added in response to stakeholder concerns and because it is unreasonable to deem these vehicles as available for purchase.

New subsection (4) was added to specify criteria that ZEVs or NZEVs offered as a temporary reservation but is not currently available to order are not considered available for purchase. This was added to consider the possibility that a prospective new vehicle in the concept stage may not actually be available for purchase. This addition is also necessary to ensure a legitimate order for the ZEV or NZEV is established and to ensure timely delivery and deployment of the purchased ZEV or NZEV in the fleet.

Subsection (5) was modified from the original proposal to include the qualifying language “ZEVs or NZEVs that do not conflict with safety standards that the fleet owner is subject to, if applicable” to contextualize the safety standard criteria that was moved to this section. This is also necessary to ensure that it is the fleet owner who is subject to the safety standards for operating the vehicle, rather than the safety standards that the body outfitter might be subject to when outfitting the vehicle at the manufacturing facility. Further clarifying language was added to let a fleet owner know they must submit what safety laws or standards that would be in conflict and for what reasons.

35. In section 2015.3(e)(2), new subsection (E) was added to establish the process that the Executive Officer will use to make their determination as to whether a fleet owner’s application is to be approved. Language was added to clarify that the Executive Officer will be comparing vehicle configurations within the same or next higher weight class, except for Class 8 vehicles which would only be compared to the same class as Class 8 is the highest weight class. This language was added to establish that the determination is made for an equivalent weight vehicle class. Language was added to let a fleet owner know that the exemption will otherwise be approved if the Executive Officer determines that the criteria specified in sections 2015.3(e)(2)(C) through (G) are met. The Executive Officer will rely on the information specified in sections 2015.3(e)(2)(A) through (G) and their good engineering and business judgement to make this determination. It is necessary to allow the Executive Officer and their good engineering and business judgement to assess applications because CARB needs to analyze submitted information and data to determine whether the exemption criteria have been met and that the data provided is applicable to the vehicle configuration and weight class for which the exemption is being sought.

Language was added to let the fleet owners know the process if the Executive Officer denies the exemption, which includes supplying the applicant with the name(s) of the manufacturer(s) or authorized dealer(s) that offered a ZEV or NZEV in the needed vehicle configuration and removing the respective vehicle configuration from the ZEV Purchase Exemption List. This language was added to establish a process when the Executive Officer adds a vehicle to the ZEV Purchase Exemption List upon approval of an exemption application.

36. Section 2015.3(e)(2)(F) was added to establish that the vehicle configuration will be added to the ZEV Purchase Exemption List if the Executive Officer cannot identify any manufacturer that offers a ZEV or NZEV chassis or complete ZEV or NZEV for sale in the needed configuration and weight class. It is necessary to provide a pathway by which the Executive Officer can use information from the fleet-specific exemption process to add vehicle configurations to the ZEV Purchase Exemption List to allow other fleet owners to purchase a new ICE vehicle of the same configuration and weight class without submitting an exemption request.

37. Section 2015.3(e)(2)(G) was added to establish that if the Executive Officer determines that a vehicle configuration listed on the ZEV Purchase Exemption List no longer meets the criteria specified in section 2015.3(e)(2)(C). If such a determination is made, on the Advanced Clean Fleets website, the Executive Officer will notify the public of the determination by posting the vehicle configuration, weight class, and exemption expiration date on and after which the vehicle will no longer be eligible to purchase as an ICE vehicle from the ZEV Purchase Exemption List, which shall be the first day of the month after 180 calendar days after posting the determination. This addition is necessary to establish the process in which a ZEV Purchase Exemption List vehicle configuration exemption expires. The 180-calendar day timeframe is necessary to ensure the availability of the vehicle configuration before the list exemption expires in the event a manufacturer rescinds an offer or other unanticipated circumstances occur that cause the vehicle configuration to no longer be available. Publicly posting the information allows the public to have sufficient time to plan for the expiration of the configuration on the list.

Language was added specifying the Executive Officer will rely on information gathered from fleet owners or manufacturers, including information gathered to comply with other CARB-administered programs, manufacturer websites, manufacturer documentation, authorized dealers, CARB-issued Executive Orders, and their good engineering and business judgement in making this determination. This addition is necessary to specify the information to be used in determining the availability of a vehicle configuration. It is necessary to derive this information from a multitude of sources to ensure accuracy of the ZEV Purchase Exemption list. It is also necessary to allow the Executive Officer and their good engineering and business judgement to make these determinations because CARB needs to analyze the given information to determine the availability status of a vehicle configuration.

38. Section 2015.3(e)(2)(H) provides 45 calendar days from the date a complete application is received for the Executive Officer to notify the fleet owner by email whether the exemption has been approved. If the Executive Officer does not respond to within this timeframe, the exemption will be deemed approved. This addition is necessary to ensure sufficient response time for manufacturers or authorized dealers and review time of the complete application by the Executive Officer. It is also necessary as it provides a timeframe in which a fleet owner can expect a response for their exemption request.

39. Section 2015.3(e)(2)(I) contains modified language from the section previously numbered as 2015.3(e)(2). Clarifying language was added to specify that only fleet owners whose exemption request has been granted must comply with the reporting and recordkeeping requirements.

40. In section 2015.3(f)(1), language "and provide" was deleted because this action is discussed in Section 2015.5. Language was also modified from "or" to "and" in reference from which sections fleet owners would be exempt, because the intent of the exemption is to exempt fleet owners that meet the criteria from both sets of

requirements, not one or the other. This change is necessary to ensure only one logical and reasonable interpretation.

41. In section 2015.3(f)(2), language was added to refer a fleet owner to other sections in the regulation that explain the action the fleet is requesting an extension for, e.g., ZEV Addition requirement for fleet owners complying with the Model Year schedule, and the action to purchase a new ICE vehicle and exclude from calculations for fleet owners who have opted to comply with the Milestone schedule. This is necessary to link to the action the fleet owner is requesting an extension for, to the appropriate compliance schedule and criteria established in this section. Language was modified and moved here from prior sections to establish a limit to the total number of new ICE vehicles allowed to be purchased under this exemption. This limit was set to not exceed 25 percent of the total number of vehicles in the fleet owner's California fleet in the calendar year the exemption is approved, less the number of ICE vehicles already in the fleet purchased pursuant to a granted exemption. It is necessary to limit the amount of ICE vehicles purchased for reasons described in the ISOR. The new addition to this limitation includes specificity about how to calculate the number of vehicles that the 25 percent cap applies to, by counting the total number of vehicles in the California fleet in the calendar year the exemption is approved, less the number of ICE vehicles in the fleet already purchased under granted exemptions. This change is necessary to specify how a fleet owner must make this calculation. Subtracting the number of ICE vehicles already purchased pursuant to granted exemptions from this total is necessary because the point of the provision is to allow a fleet owner flexibility to respond to mutual aid emergencies with up to a quarter of the fleet; if a proportion of the fleet is already composed of ICE vehicles, the exemption would not be needed for that proportion, as they are already able to respond to mutual aid emergencies. This also closes a loophole by which fleet owners could use multiple exemptions to expand their mutual aid ICE vehicle counts beyond the 25 percent cap specified. Language was added to modify the minimum ZEV percentage fleetwide thresholds established to qualify a fleet owner to apply for the Mutual Aid Assistance exemption. These were lowered to at least: 25 percent until January 1, 2032, 50 percent until January 1, 2035, and 75 percent thereafter. This change is necessary to meet Board direction to improve access to the Mutual Aid Assistance Exemption by significantly decreasing the thresholds to qualify for this exemption. With these modifications, fleets will only need to electrify a quarter of their vehicles to qualify, as compared to the previous requirement for three quarters. In addition, language was removed requiring vehicles using the Mutual Aid Assistance Exemption to have a GVWR above 14,000 lb. This change is necessary to meet Board direction to streamline criteria for the regulation's flexibilities by allowing Class 2b-3 vehicles to claim this exemption if available ZEVs do not meet the fleet's needs. Clarifying language directing the fleet owner to the criteria outlined in the following sections (B) and (C) was also added.
42. In section 2015.3(f)(2)(B), language regarding a signed statement or email from each authorized installer of the needed vehicle body stating that it cannot be configured on the chassis without violating safety laws or standards was removed, as this

language was erroneously included in the original proposal and was meant to belong with the ZEV Purchase Exemption, as originally proposed. Language regarding a signed statement of email from the vehicle manufacturer stating the chassis is not compatible with the applicable configuration was removed for the same reason. Additionally, language referring to submitting documentation from the manufacturer and mobile fueling providers with compatible mobile fueling options was modified and moved to renumbered subsection (C). Language was added specifying that fleet owners must submit documentation from each manufacturer offering ZEVs for sale of the same configuration and weight class as the ICE vehicle submitted describing the charging or refueling connector and charging or fueling time capability from each manufacturer offering ZEVs for sale. This change is necessary to determine the mobile fueling compatibility and the manufacturers providing the compatible mobile fueling option necessary for the criteria described in subsection (C). It is necessary to require documentation from each manufacturer to ensure the fleet owner is doing due diligence to find ZEVs that can fit their operational needs.

43. In section 2015.3(f)(2)(C), language was added to require a fleet owner to submit documentation from three mobile ZEV fueling providers, with mobile fueling options that are compatible with the ZEV's charging or hydrogen fueling connector, and system identified in (B). Language was added to allow a fleet owner to submit documentation from all mobile ZEV fueling providers that have compatible mobile fueling options if the fleet owner discovers that there are less than three mobile fueling providers available that have compatible mobile ZEV fueling options for the ZEV identified in (B). This change is necessary to limit the number of mobile fueling providers fleet owners must reach out to, to reduce the burden of this process.
44. In new section 2015.3(g), language was added creating a new Five-Day Pass exemption allowing a vehicle to enter California for five consecutive days once per vehicle per calendar year without adding it to the California fleet. This is necessary to meet Board direction to provide flexibility to transient vehicles. This exemption gives needed flexibility to fleets who need to bring a vehicle into California for a limited amount of time without counting towards that fleet's California requirements. The language also specifies this exemption sunsets on January 1, 2035. This is necessary to provide sufficient time for fleets to use this exemption in the earlier years of the regulation where there may not be sufficient vehicles in the fleet owner's California fleet to meet all the fleet's needs which necessitates bringing out-of-state combustion-powered vehicles into California. In addition, the language outlines the timeframe the pass is valid for, the criteria to apply for the pass, requirements to keep a copy of the pass within the vehicle during its operation in California, and requirements to provide a copy of the pass to CARB enforcement personnel. These are necessary to clearly outline how a fleet can apply for this exemption and the requirements to use the exemption in California. This language ensures that fleets are well aware of their requirements and CARB is able to properly enforce this regulation when inspecting vehicles in the field.

(E) Section 2015.4

1. In section 2015.4(a), language was added to specify that the method of reporting includes both a reporting site with the link provided and that exemptions or extensions requiring documentation must be submitted to a specific email address, which is also provided.
2. In section 2015.4(b), language was updated to clarify that fleet owners must include all the information specified in section 2015.4 in their compliance report due every year by February 1 and reported information must represent the California fleet's composition as of January 1 of the corresponding calendar year. Language was also added to state that the reporting deadline did not apply changes to an existing fleet as specified in 2015.4(e).
3. In section 2015.4(c)(1), the language "Fleet owners must report the following:" was removed because it was duplicative.
4. In section 2015.4(c)(1)(I), language was added to require the fleet to identify if it is a state or local government fleet. This change is necessary to identify fleets utilizing the new option in section 2013 which allows such fleets to opt-in to the ZEV Milestones Option.
5. In section 2015.4(c)(1)(J), language was added to require the fleet owner to identify if they are a waste or wastewater fleet owner. This change is necessary to identify fleets to which the waste and wastewater fleet option apply to those types of fleet owners.
6. In section 2015.4(c)(1)(K)(1), language was added to clarify the year in which the entity that owns the reported fleet exceeded \$50 million in total annual gross revenue.
7. In section 2015.4(c)(1)(N), language was modified to require the fleet owner to identify if they have elected to opt-in to the ZEV Milestones Option. This change is necessary to require the fleet owner to formally declare if they are choosing to opt-in to the ZEV Milestones Option.
8. In section 2015.4(c)(2)(L), language was modified to require fleet owners to report the engine family for any vehicles added to the California fleet after January 1, 2024. This included tractors with a vehicle model year that is 12 years old or older, and all other vehicles with a vehicle model year that is 17 years old or older. These requirements are necessary for staff to be able to confirm the reported engine model year that is coded into the family name to verify minimum useful life for reported vehicles. It is necessary to limit the reporting to tractors that are 12 years old or older and other vehicles with vehicle model years 17 years old or older to reduce the reporting burden for vehicles that are not near the end of their minimum useful life. The requirement to report this information for all vehicles added to the California fleet after January 1, 2024, is necessary for staff to implement the newly added requirement that ICE vehicles added to the California fleet after January 1,

2024, be California certified, and the engine family information provided would enable staff to verify this requirement.

9. In section 2015.4(c)(2)(M), language was modified to require fleet owners to report the engine model year for any vehicles added to the California fleet after January 1, 2024. This included tractors with a vehicle model year that is 12 years old or older, and all other vehicles with a vehicle model year that is 17 years old or older. These requirements are necessary for staff to be able to confirm the reported engine year that is coded into the family name to verify minimum useful life for reported vehicles. It is necessary to limit the reporting to tractors that are 12 years old or older and other vehicles with vehicle model years 17 years old or older to reduce the reporting burden for vehicles that are not near the end of their minimum useful life. The requirement to report this information for all vehicles added to the California fleet after January 1, 2024, is necessary for staff to implement the newly added requirement that ICE vehicles added to the California fleet after January 1, 2024, be California certified, and the engine model year information provided would enable staff to verify this requirement.
10. In section 2015.4(c)(2)(Q), new subsection (Q) was added to establish that fleet owners claiming a five-day pass exemption must report the first day the pass will be used. This change is necessary to determine if a fleet is legally operating in California within the allotted timeframe of an authorized five-day pass and enhances enforcement of the requirement.
11. In section 2015.4(c)(2)(R), new subsection (R) was added to require fleet owners utilizing the Model Year Schedule that are replacing a vehicle in accordance with the ZEV Purchase Exemption to identify which vehicle is being replaced pursuant to the minimum useful life limitations. This change is necessary because it will clearly require fleet owners to identify which vehicle is claiming the exemption to demonstrate compliance with the regulation.
12. In section 2015.4(c)(2)(S), new subsection (S) was added to establish that fleet owners must identify whether the ICE vehicle being reported is replacing another vehicle that was in an accident and is non-repairable, if applicable. This change is necessary to identify which vehicle is designated to use the Non-Repairable Vehicle exemption under the Model Year Schedule.
13. In section 2015.4(e), language was added to specify that the reporting requirement when adding or removing vehicles only applies to vehicles that are part of the California fleet. This change is necessary to prevent reporting for vehicles added or removed to the fleet outside of the California fleet.
14. In section 2015.4(e)(4), existing language was modified to clarify that the type of change to the existing fleet being reported is a ZEV conversion as opposed to a ZEV re-power.
15. In section 2015.4(f), clarifying language was added to specify that the section applies to fleet owners that own or operate the vehicles listed. Language was modified to

specify any tractors that are ICE vehicles or NZEVs with a vehicle model year that is 12 years older or older must meet the odometer reading reporting requirements. Language was added to include tractors that are ICE vehicles purchased pursuant to an exemption with a vehicle model year that is 12 years old or older and are following the ZEV Milestones Option. It is necessary to specify tractors that are ICE vehicles or NZEVs with a vehicle model year that is 12 years or older to include all tractors and because fleets complying with the Model Year Schedule will need to remove vehicles from their California fleet that have exceeded their minimum useful life. It is also necessary to include tractors that are ICE vehicles purchased pursuant to an exemption with a vehicle model year that is 12 years old or older and are following the ZEV Milestones Option to ensure that all information necessary to claim and be eligible for that exemption is reported.

16. In section 2015.4(f)(1), language was added to provide a date of January 1 of the current calendar year for odometer reading reporting requirements. This change is necessary to specify an exact date that the odometer reading must be taken, to ensure that annual readings cover the period of exactly one year, and to prevent more than one reasonable and logical interpretation of the reporting deadline.
17. In section 2015.4(f)(2), language was added to address odometer failure and specify the process of reporting when the vehicle's originally equipped odometer has failed and is replaced. This change is necessary to accommodate circumstances in which an odometer fails and to provide subsequent reporting procedures to remain in compliance.
18. In section 2015.4(f)(2)(A), language was modified to clarify that the fleet owner must equip the vehicle with a hubodometer if the originally equipped odometer has failed and is not being replaced. The fleet owner must report the hubodometer's serial number within 30 calendar days of the date it was installed. This change is necessary to clarify that it is a requirement for a hubodometer to be installed in the event that the vehicle's original odometer fails and is not replaced. This is necessary for CARB to implement and enforce mileage-based requirements in the event an original odometer fails and is not replaced. It is also necessary that the failed odometer be reported within 30 calendar days as it provides a reasonable timeframe for a fleet owner to report any changes that affect compliance requirements.
19. In section 2015.4(f)(3), language was modified to state more clearly that fleet owners must report the number of miles travelled in support of an emergency for backup vehicles used in emergency operations that would exceed the backup vehicle mileage limit, or other vehicles utilizing an exemption due to a declared emergency event. This change is necessary to prevent more than one reasonable and logical interpretation of the criteria.
20. In section 2015.4(g), the Vehicle Delivery Delay Reporting language was modified to remove any reference to NZEVs. This change is a necessary conforming modification as the regulation already establishes when an NZEV is equivalent to a ZEV. Therefore, only the term ZEV is necessary.

21. In section 2015.4(i), the title of the section was renamed from “ZEV Unavailability” to “ZEV Purchase Exemption” to clarify the purpose of the exemption. In addition, language was added to specify that fleet owners must submit the purchase agreement and photographs, as specified in the following subsections, of the ICE vehicle purchased pursuant to the ZEV Purchase Exemptions within 30 calendar days of receiving the new ICE vehicle. Language was also modified to reflect the updated name of the ZEV Purchase Exemptions. This change is necessary as it provides a reasonable timeframe for a fleet owner to report any changes that might affect compliance.
22. In section 2015.4(k), language was streamlined to reflect “any exemption or extension requests that are required to be submitted to *TRUCRS@arb.ca.gov*” as opposed to listing all the applicable sections in the regulation. In addition, the approval process period was updated from 30 days to 45 days from receipt of a complete submission to ensure optimal evaluation of the submission. This change is also necessary to be consistent with the ZEV Purchase Exemption.
23. In section 2015.4, a new subsection (l) was added to provide a pathway by which fleet owners that report late may demonstrate compliance. It also establishes the time frame during which this may be done, the reporting requirements, and how supporting documentation may be submitted. Lastly, it specifies under what circumstances penalties may be applied and where in the regulation additional information about the penalties is located. This addition is necessary to provide flexibility to fleet owners that become aware of the regulation after the initial implementation period to report for a desired compliance pathway.
24. In section 2015.4, new subsection (m) was added to establish the reporting process fleet owners must follow to exclude intermittent snow removal vehicles from the ZEV Milestones Calculation and the vehicle count for each Milestone Group under the ZEV Milestones Option. This change is necessary because it will clearly have fleet owners’ identity which vehicle is claiming the exclusion in order to demonstrate compliance with the regulation. This language includes the Executive Officer’s reliance on the information and photos submitted by the fleet owner and their engineering judgement to determine whether a vehicle meets the definition of an intermittent snow removal vehicle specified in section 2015(b) and will notify the fleet owner via email within 45 days of receiving a request whether the request is approved and will immediately designate the requested vehicle as an intermittent snow removal vehicle.
25. In section 2015.4(m)(1-5), new subsections (1-5) were added to describe the photographs that are required to be submitted by the fleet owner. This change is necessary as the photographs capture a complete picture of the vehicle for staff to audit and to ensure it is an intermittent snow removal vehicle as defined.

(F) Section 2015.5

1. In section 2015.5, language was added stating that fleet owners must retain records of reported information required by section 2015.4 and documentation required to be kept by section 2015.5 for at least five years from the date the information is used to demonstrate compliance, and must provide those records upon a written or verbal request within 72 hours. This change is necessary to make clear the record retention period and that requests may be verbal or in writing in the section that initially addresses recordkeeping requirements.
2. Throughout the subsections of 2015.5, language "and provide" was removed from each subsection; this is necessary because the introduction to section 2015.5 already indicates fleet owners must both keep and provide documentation listed, so it was removed to improve readability of the regulation and prevent unnecessarily duplicative language.
3. In section 2015.5(a), a reference to section 2015.5(k) was removed. This change is necessary as this section no longer refers to the subsection pertaining to record retention.
4. In section 2015.5(a)(3)(A), the term "mileage" was replaced with "odometer." This change was necessary to specify the method of acquiring the information to be provided to CARB, for clarity, and to match changes made elsewhere in the regulation language.
5. In section 2015.5(c), language was modified to require that odometer documentation must include an odometer reading from the vehicle for which the records are kept. This requirement is necessary to ensure that the listed documents have a reading for CARB staff to audit and improves the enforceability of the regulation. Language was also modified to specify that Basic (previously Biennial) Inspection of Terminals inspection documentation is a form, rather than a record, which was an erroneous inclusion in the original proposal. Staff added "previously Biennial" for clarification and to reduce confusion as California Highway Patrol updated the term in 2016. Reference to fuel tax records was removed because these documents may not have odometer readings and would not be useful in an audit. Language was added to include California Highway Patrol (CHP) Truck and/or Tractor Maintenance and Safety Inspections form as an acceptable and auditable odometer reading document, as trucks often are subject to inspection by the CHP and these forms have an odometer reading, providing a reliable third-party verification of the odometer. Language about maintenance records was modified to specify that they would be maintenance or service work orders, invoices, or receipts, and language was added to allow for driver logs or inspection sheets, as these documents typically have a recorded odometer reading, and driver logs can be used to verify readings on these documents. Language was added to clarify that only mileage accrued in support of an emergency event may qualify for applicable exemptions as specified in section 2015.3(f). This change is necessary to clarify the

conditions in which a fleet may accrue emergency event mileage and to match changes made elsewhere in the regulation language.

6. In section 2015.5(d), language was added which states that fleet owners must provide documentation as specified in section 2015.3(d), Vehicle Delivery Delay Extension, to CARB that supports the fleet owners' request and qualification for the extension. This change was necessary to clarify the scope of records that must be kept and the required documents that must be submitted to CARB under section 2015.5(d).
7. In section 2015.5(e), language was added which states that fleet owners must provide documentation as specified in 2015.3(b), Daily Usage Exemption, to CARB that supports the fleet owners' request and qualification for the extension. This change was necessary to clarify the scope of records that must be kept, to only the required documents that must be submitted to CARB under section 2015.5(e).
8. In section 2015.5(f), language was added which states that fleet owners must provide documentation as specified in section 2015.3(c) to CARB that supports the fleet owners' request and qualification for the extension. References to purchase agreements was also removed. This change was necessary to clarify the scope of records that must be kept, to only the required documents that must be submitted to CARB under section 2015.3(c) as well as remove references to documents no longer required by the infrastructure delay extension.
9. In section 2015.5(g), language was added which state that fleet owners must provide documentation as specified in section 2015.3(f), Exemptions Pursuant to Declared Emergency Events, to CARB that supports the fleet owners' request and qualification for the extension. In addition, references to public bids and requests for information was removed. This change was necessary to clarify the scope of records that must be kept, to only the required documents that must be submitted to CARB under section 2015.5(g) as well as remove references to documents not referenced by the emergency event exemptions.
10. In section 2015.5(h), language was modified to state that fleet owners must provide documentation as specified in section 2015.2(d), Rental Vehicle Option, to CARB. This change was necessary to clarify the scope of records that must be kept, to only the required documents that must be submitted to CARB under section 2015.5(h).
11. In section 2015.5(j), language was added which states that fleet owners must provide documentation as specified in section 2015.4(i), ZEV Purchase Exemption Supporting Documentation Reporting, as well as section 2015.3(e), ZEV Purchase Exemptions, to CARB. In addition, specific documentation required was removed as it was no longer necessary for it to be listed. This change was made to clarify the scope of records that must be kept, to only the required documents that must be submitted to CARB under section 2015.5(j) as well as section 2015.3(e).
12. In section 2015.5, a new subsection (k) was added which states that fleet owners must keep and provide copies of the vehicle specification sheet from the

manufacturer and photographs as specified in section 2015.4(l), Intermittent Snow Removal Vehicle Reporting, to CARB. This additional section was necessary to support the new exemption and clarify the scope of records that must be kept, to only the required documents under section 2015.5(k).

13. In section 2015.5, a new subsection (l) was added which states that fleet owners must keep and provide copies of written sales disclosures as specified in section 2015(q), Sales Disclosure of Regulation Applicability, to CARB. This additional section was necessary to clarify the scope of records that must be kept to only the required documents submitted to CARB under section 2015.5(l).
14. In section 2015.5, a new subsection (m) was added to inform fleet owners of the scope of documents that must be kept and provided to CARB as evidence of eligibility for Waste and Wastewater Fleet Option, section 2015.2(e).

Subsection (1) was added to require waste fleet eligibility documents with provisions requiring the collection, hauling, and/or processing of diverted in-state organic waste are necessary to prove the waste fleet is involved in supporting the diversion of organic waste. Subsection (1)(A) was added to require government agency waste fleets keep a copy of the local ordinance, regulation, or code that includes the above eligibility provisions for government fleets is necessary to establish municipal waste fleets' eligibility, as these are official documents subject to public scrutiny and are necessary to ensure enforceability of the option. Subsection (1)(B) was added to specify that for non-government fleets, franchise agreements or long-term contracts with a government agency are necessary to clearly establish a long-term relationship with a government entity implementing organic waste diversion. The rationale for

Subsection (2) was added to require a copy of the waste fleet's internal database identifying which tractors are exclusively used as transfer trucks; this is necessary for CARB to verify that vehicles reported as transfer trucks under the option are eligible.

Subsection (3) was added to require wastewater fleets submit a copy of a permit or license to operate, or proof of ownership of, a wastewater treatment facility; this is necessary to establish, and for CARB to verify, that the reporting entity is in fact a wastewater entity.

Subsection (4) was added to require records of all fuel contracts in effect for affected vehicles as of January 1, 2024, and all fuel contracts that are executed on and after January 1, 2024. These are necessary to establish and for CARB to verify that reported vehicles are in fact being exclusively fueled with RNG.

Subsection (5) was added to require a copy of vehicle registration identifying the wastewater fleet as the owner, or documentation showing the vehicle was purchased with an account indicating expenses incurred by the wastewater entity and assigned to the wastewater fleet. This is necessary to establish and for CARB to verify that the reported vehicles are in fact owned by or exclusively assigned to wastewater fleets.

These additions are necessary to support the new option as well clarify the scope of records that must be kept.

15. In renumbered section 2015.5(n), record retention language was removed as it is now addressed in section 2015.5. New language was added to this section to address the records required for the newly added Non-repairable Vehicle exemption. These records include: police report, insurance statement, signed attestation, photographs, and information submitted to CARB as specified in section 2015.1(c)(9). These additions are necessary to support the new option and clarify the scope of records required.
16. In newly added section 2015.5(o), language was added to specify required documentation for ZEVs operated in California for fleet owners utilizing the ZEV Milestones Option of section 2015.2. The documentation must show each reported ZEV was operated in California during every calendar year in which the ZEV was reported as being part of the fleet owner's California fleet. This addition is necessary to close a loophole by which fleet owners could artificially inflate their ZEV counts under the Milestones option by reporting ZEVs that the fleet owns, but that never are operated in California during the calendar year they are reported for compliance. The various documents are necessary to include as each document can show CARB staff information proving the vehicle was operated in California during a given calendar year in question.

(G) Section 2015.6

1. In section 2015.6(b), subsection 2015.6(b)(1) was added that defines late reporting penalties beginning January 1, 2025, and until January 1, 2027. Until January 1, 2027, fleets that fail to report required information will be penalized once for each vehicle each month information is not submitted past the initial reporting period specified in section 2015.4(b). CARB will assess compliance violations based on the Model Year Schedule as specified in 2015.1 for fleet owners that report late. This additional subsection is necessary to conform with changes made allowing for late reporting to define the late reporting penalty of the proposed ACF regulation as well as incentivize on-time reporting as the proposed regulation matures. Assessing penalties on a per vehicle per month basis is necessary to provide some leniency for fleets that report late because outreach efforts cannot reach every possible regulated party and the Health and Safety code allow for violations to be assessed on a per vehicle per day basis. It is necessary to specify that compliance violations be assessed based on the Model Year Schedule because it is the default compliance option of the regulation, and recognizes that fleets owners desiring to use the ZEV Milestones Option must have reported and waived certain HSC protections by January 1, 2024, and could enjoy an advantage over other fleets that reported on time if penalties were assessed based on the compliance option the fleet desires.
2. In section 2015.6, a new subsection (d) was added to group similar language about enforcement criteria together and to conform with changes to the "fleet owner" definition. The change was necessary to improve readability of the regulation. The language remains the same as originally proposed and the rationale for the inclusion

of this specific language is available in the Advanced Clean Fleets Initial Statement of Reasons.

D. 100 Percent ZEV Sales

The following numbered list provides the purpose and rationale for staff's proposed changes to the draft regulation order provided as Appendix A-4.

1. In section 2016(a) the language was modified for the model year requirement to sunset at the end of 2035 instead of 2039. This change is necessary to ensure the requirements of the Advanced Clean Trucks regulation sunset when the 100 percent sales requirement begins.
2. In section 2016(b) the language was modified from 2040 to the 2036 model year. This change is necessary to correspond with the 2035 model year requirement described in section 2016(d).
3. In section 2016(d) the language was modified to reflect a 2036 model year 100 percent ZEV sales requirement. This change meets Board direction and is necessary to achieve state air quality and climate goals. Accelerating the 100 percent manufacturer ZEV sales requirement sends a stronger market signal indicating the end of combustion-powered sales in California in 2036 rather than in 2040. Given the long lead time before this requirement takes place, manufacturers have sufficient time to plan their transition to installing all electric drivetrains. Moving up the 100 percent sales date is likely to improve availability of battery-electric and hydrogen fuel cell vehicles in all configurations, increases the likelihood manufacturers will coordinate with infrastructure providers, and design vehicles to meet the needs for all duty cycles. An earlier date also places more of the onus on manufacturers to develop these technologies and to make them available for fleets at a competitive price rather than placing the primary responsibility on fleet owners.
4. In section 2016(e), language was added to specify the zero-emissions powertrain requirement would begin with the 2036 model year. This change is necessary to specify when the requirement would begin, as the prior requirement in effect due to the Advanced Clean Trucks regulation would sunset beginning with the 2036 model year, and it is necessary that manufacturers are made aware of when the new requirements take effect.
5. In section 2016(f) the language was modified to reflect the 2036 model year for the manufacturer reporting requirement. This change is necessary to correspond with the 2035 model year requirement described in section 2016(d).
6. In section 2016(h)(1), language was removed specifying requests by the Executive Officer to request information for validation must be for audit. This change is necessary to ensure that staff are able to request needed information to verify the authenticity of reported data. Language was also removed stating that submitting false information is a violation of this regulation and is subject to penalty. This

change is necessary as this is duplicative with requirements already within the Health and Safety Code.

7. In section 2016(h)(2) the language was modified to conform with the change of starting with the 2036 vehicle model year instead of the 2040 model year. This change is necessary to correspond with the 2035 model year requirement described in section 2016(d). In addition, the section title was truncated. This change is necessary to improve readability of the regulation.

In addition to the modifications described above, additional modifications correcting grammar, punctuation and spelling have been made throughout the proposed changes. These changes are nonsubstantive.

Additional Documents or Incorporated Documents Added to the Record

In the interest of completeness and in accordance with Government Code section 11347.1, subdivision (a), staff has also added to the rulemaking record and invites comments on the following additional documents.

Incorporated Documents:

1. California Air Resources Board, "California Standards and Test Procedures for New 2021 and Subsequent Model Heavy-Duty Zero-Emission Powertrains", adopted June 27, 2019.
2. Code of Federal Regulations, Title 49 section 523.2 Title V of the Motor Vehicle Information and Cost Savings Act Vehicle Classification Definitions as it existed on June 3, 2022. Code of Federal Regulations, Title 40 section 11037.801, as last amended by USEPA on June 17, 2013
3. SAE, SAE Recommended Practice SAE J1667 "Snap-Acceleration Smoke Test Procedure for Heavy-Duty Diesel Powered Vehicles," as issued February 1996

References added:

1. Advanced Clean Tech News, Can Fleets Expect CNG Infrastructure to Grow in 2023?, January 25, 2023 (web link: <https://www.act-news.com/news/can-fleets-expect-cng-infrastructure-to-grow-in-2023/>, last accessed January 2023).
2. Amazon, Amazon's custom electric delivery vehicles are starting to hit the road, February 3, 2021 (web link: <https://www.aboutamazon.com/news/transportation/amazons-custom-electric-delivery-vehicles-are-starting-to-hit-the-road>, last accessed August 2022).
3. Ambrose, Hanjiro; Kendall, Alissa (2019), Life Cycle Modeling of Tech & Strategies for a Sustainable Freight System in California, Dryad, Dataset, October 13, 2019 (web link: <https://datadryad.org/stash/dataset/doi:10.25338/B8NS4T>, last accessed January, 2023).
4. Atmospheric Environment, Non-exhaust PM emissions from electric vehicles, 2016 (web link:

- <https://www.sciencedirect.com/science/article/abs/pii/S135223101630187X?via%3Dihub>, page 16, last accessed January 2023).
5. Bieker, George. A Global Comparison of the Life-Cycle Greenhouse Gas Emissions of Combustion Engine and Electric Passenger Cars. 2021 (web link: <https://theicct.org/publication/a-global-comparison-of-the-life-cycle-greenhouse-gas-emissions-of-combustion-engine-and-electric-passenger-cars/>, last accessed January 2023).
 6. CalStart, The Zero-Emission Freight Revolution: California Case Studies, 2022 (web link: <https://cdn.lightsproject.com/downloads/volvo-lights-website-content-news-resource-evs35-zero-emission-freight-revolution-report.pdf>, last accessed January 2023).
 7. CalStart, COP27, November 17, 2022 (web link: <https://globaldrivetozero.org/2022/11/16/cop27-usa-growing-number-nations-sign-global-mou/>, last accessed February 2023).
 8. CARB. 2021 Annual Evaluation of Fuel Cell Electric Vehicle Deployment and Hydrogen Fuel Station Network Development, 2021 (web link: https://ww2.arb.ca.gov/sites/default/files/2021-09/2021_AB-8_FINAL.pdf, last accessed August 2022).
 9. CARB, 2022 Scoping Plan For Achieving Carbon Neutrality, November 16, 2022 (web link: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf, last accessed January 2023).
 10. CARB, 2022 State Strategy for the State Implementation Plan, September 22, 2022 (web link: https://ww2.arb.ca.gov/sites/default/files/2022-08/2022_State_SIP_Strategy.pdf, last accessed February 2023).
 11. CARB, Appendix D: Emissions Inventory Methods and Results for the Proposed Amendments, 2022 (web link: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/accii/appd.pdf>, last accessed February 2023).
 12. CARB, Comment Letter to the United States Postal Service Regarding the Supplemental Environmental Impact Statement, 2022
 13. CARB, LCTI: Fast-Track Fuel Cell Truck, 2022 (web link: <https://ww2.arb.ca.gov/lcti-fast-track-fuel-cell-truck>, last accessed August 2022).
 14. CARB, LCTI: Fuel Cell Hybrid Electric Delivery Van Deployment, 2022 (web link: <https://ww2.arb.ca.gov/lcti-fuel-cell-hybrid-electric-delivery-van-deployment>, last accessed August 2022).
 15. CARB, LCTI: Next Generation Fuel Cell Delivery Van Deployment, 2022 (web link: <https://ww2.arb.ca.gov/lcti-next-generation-fuel-cell-delivery-van-deployment>, last accessed August 2022).
 16. CARB, LCTI: NorCAL ZE Regional and Drayage Operations with Fuel Cell Electric Trucks, 2022 (web link: <https://ww2.arb.ca.gov/lcti-norcal-zero-emission-regional-and-drayage-operations-fuel-cell-electric-trucks>, last accessed August 2022).

17. CARB, LCTI: Port of Los Angeles "Shore to Store" Project, 2022 (web link: <https://ww2.arb.ca.gov/lcti-port-los-angeles-shore-store-project>, last accessed August 2022).
18. CARB, Executive Officer Memo to Board - Advanced Clean Fleets Regulation High Priority Fleet Size Analysis, 2023 (web link: https://ww2.arb.ca.gov/sites/default/files/2023-02/HPF%20Fleet%20Size%20Board%20Memo_ADA.pdf, last accessed March 2023).
19. CARB, A Method to Prioritize Sources for Reducing High PM2.5 Exposures in Environmental Justice Communities in California. CARB Research Contract Number 17RD006, 2019 (web link: <https://ww2.arb.ca.gov/sites/default/files/classic/research/apr/past/17rd006.pdf>, last accessed March, 2022).
20. CARB, Letter to the United States Postal Service Regarding a Hearing on the Environmental Impact Statement, 2022
21. CARB, Letter to the United States Environmental Protection Agency Regarding the United States Postal Service's the Environmental Impact Statement, 2022
22. CARB, Updated Advanced Clean Fleets Cost Analysis, 2023.
23. CARB, Updated Advanced Clean Fleets Health Benefits Analysis, 2023.
24. CARB, Updated Advanced Clean Fleets Inventory Analysis, 2023.
25. California Environmental Protection Agency. Lithium-Ion Car Battery Recycling Advisory Group Final Report. March 16, 2022 (web link: https://calepa.ca.gov/wp-content/uploads/sites/6/2022/05/2022_AB-2832_Lithium-Ion-Car-Battery-Recycling-Advisory-Group-Final-Report.pdf , last accessed June 2022).
26. California Energy Commission (CEC), Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment, July 2021 (web link: <https://efiling.energy.ca.gov/getdocument.aspx?tn=238853>, last accessed January 2023).
27. CEC, CED 2022 Hourly Forecast - CAISO - Planning Scenario, January 2023 (web link: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=248359&DocumentContentId=82768>, last accessed January 2023).
28. CEC, 2022–2023 Investment Plan Update for the Clean Transportation Program, 2022 (web link: <https://www.energy.ca.gov/publications/2022/2022-2023-investment-plan-update-clean-transportation-program>, last accessed February 2023).
29. CEC, Transportation Fuel Price Forecasts, 2023.
30. California Governor's Office of Business and Economic Development, California Launches Statewide Alliance to Establish Federally Co-Funded Hydrogen Hub, 2022. (web link: <https://mailchi.mp/gobiz/california-formally-announces-intention-to-create-a-renewable-hydrogen-hub-8132768?e=1cc54c34ef>, last accessed February 2023).

31. Carscoops.com, Nissan Trials Electric Car Haulers In Los Angeles, 2023 (web link: <https://www.carscoops.com/2023/02/nissan-trials-electric-car-haulers-in-los-angeles/>, last accessed February 2023).
32. Chemical & Engineering News, Lithium Iron Phosphate Comes to America, January 29, 2023 (web link: <https://cen.acs.org/energy/energy-storage-/Lithium-iron-phosphate-comes-to-America/101/i4>, last accessed January 2023).
33. Chevron, Iwatani Agreement 30 Hydrogen Stations in CA — Chevron.com, 2022 (web link: <https://www.chevron.com/newsroom/2022/q1/chevron-iwatani-announce-agreement-to-build-30-hydrogen-fueling-stations-in-california>, last accessed August 2022).
34. Coalition for Electric Vehicle Transportation, February 7, 2023 letter to Chairman Carper, Ranking Member Capito, Chairman Graves, and Ranking Member Larsen on targeted legislation that would increase gross vehicle weight limits for stinger-steered automobile transporters by 10%, which is 8,000 pounds, while capping single and tandem axle groups at a 10% increase. (web link: <https://landline.media/wp-content/uploads/2023/02/Coalition-for-Electric-Vehicle-Transportation-to-Congress-FINAL.pdf>, last accessed February, 2023).
35. California Public Utilities Commission (CPUC), Version 2.0 of its Distributed Energy Resources (DER) Action Plan. (web link: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M467/K470/467470758.PDF>, last accessed March, 2022).
36. CPUC, California Public Utilities Commission. Proposed Decision: Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future, 2022 (web link: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/transportation-electrification/electricity-rates-and-cost-of-fueling>, last accessed August 2022).
37. CPUC Resolution E-5192. Pacific Gas and Electric Company Advice Letter 6259-E requests approval of four vehicle-grid integration pilots pursuant to Decision 20-12-029, 2022 (web link: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M456/K322/456322989.PDF>, last accessed February, 2023).
38. CPUC Takes Action To Support Transportation Electrification, 2022 (web link: <https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-takes-action-to-support-transportation-electrification#:~:text=Governor%20Gavin%20Newsom%20has%20advanced,%241.8%20billion%20on%20EV%20charging>, last accessed February 2022).
39. CPUC, Frequently Asked Questions about Utility Complaints, 2023 (web link: <https://www.cpuc.ca.gov/consumer-support/file-a-complaint/utility-complaint/cab-faqs>, last accessed February 2023).
40. Daimler Truck, IAA Transportation 2022: Daimler Truck unveils battery-electric eActros LongHaul truck and expands e-mobility portfolio, 2022 (web link: <https://media.daimlertruck.com/marsMediaSite/en/instance/ko/IAA-Transportation->

- 2022-Daimler-Truck-unveils-battery-electric-eActros-LongHaul-truck-and-expands-e-mobility-portfolio.xhtml?oid=52032525, last accessed January 2023).
41. Design Werk, Designwerk and Kässbohrer: First electric car transporter with 1000 kWh for international market, November 2022 (web link: <https://www.designwerk.com/en/post/press/designwerk-and-kaessbohrer-first-electric-car-transporter-with-1000-kwh-for-international-market/>, last accessed February 2023).
 42. The Detroit News, 2023 Ram ProMaster commercial van preps for next year's battery-electric model, March 2022 (web link: <https://www.detroitnews.com/story/business/autos/chrysler/2022/03/09/2023-ram-promaster-van-preps-next-years-battery-electric-model/9430263002/>, last accessed February 2023).
 43. Drive to Zero, Pledge Partners, 2022 (web link: <https://globaldrivetozero.org/about/pledge-partners/>, last accessed August 2022).
 44. Earl, Thomas. Analysis of long haul battery electric trucks in EU Marketplace and technology, economic, environmental, and policy perspectives. Amended paper (August 2018) originally presented in: 8th Commercial Vehicle Workshop, Graz, 17-18, May 2018 (web link: https://www.transportenvironment.org/wp-content/uploads/2021/07/20180725_T&E_Battery_Electric_Trucks_EU_FINAL.pdf, last accessed January, 2023).
 45. Electrek, This solar + storage system reuses 1,300 EV batteries, February 7, 2023 (web link: <https://electrek.co/2023/02/07/this-solar-storage-system-is-made-up-of-1300-second-life-ev-batteries/>, last accessed February 2023).
 46. Elgowainy, Amgad, Jarod Kelly, Michael Wang. Life Cycle Greenhouse Gas Emissions for Small Sport Utility Vehicles, September 8, 2021 (web link: <https://www.hydrogen.energy.gov/pdfs/21003-life-cycle-ghg-emissions-small-suvs.pdf>, last accessed January, 2023).
 47. Energy.gov, Biden-Harris Administration Announces Funding for Zero-Emission Medium- and Heavy-Duty Vehicle Corridors, Expansion of EV Charging in Underserved Communities, 2023 (web link: <https://www.energy.gov/articles/biden-harris-administration-announces-funding-zero-emission-medium-and-heavy-duty-vehicle>, last accessed February 2023).
 48. Energy.gov, Regional Clean Hydrogen Hubs Notifications, 2022 (web link: <https://www.energy.gov/oced/regional-clean-hydrogen-hubs-notifications>, last accessed February 2023).
 49. Environmental Defense Fund, Inflation Reduction Act gives truck electrification a dose of adrenaline, 2022 (web link: <https://blogs.edf.org/energyexchange/2022/09/12/inflation-reduction-act-gives-truck-electrification-a-dose-of-adrenaline/>, last accessed January 2023).
 50. Environmental Defense Fund, Technical Review of Medium-Duty and Heavy-Duty Electrification Costs for MY 2027-2030, 2022 (web link:

- https://blogs.edf.org/climate411/files/2022/02/EDF-MDHD-Electrification-v1.6_20220209.pdf, last accessed March 2023).
51. ERM, Investment Reduction Act Supplemental Analysis: Analysis of Alternative Medium- and Heavy-Duty Zero-Emission Vehicle Business-As-Usual Scenarios, 2022 (web link: <https://www.erm.com/contentassets/154d08e0d0674752925cd82c66b3e2b1/edf-zev-baseline-technical-memo-addendum.pdf>, last accessed January 2023).
 52. Federal Highway Administration, U.S. Department of Transportation, National Electric Vehicle Infrastructure Formula Program, 2022 (web link: <https://www.federalregister.gov/d/2022-12704>, last accessed February 2023).
 53. FedEx, Charging Ahead: FedEx Receives First All-Electric, Zero-Tailpipe Emissions Delivery Vehicles from BrightDrop, December 17, 2021, (web link: <https://newsroom.fedex.com/newsroom/brightdropev600/>, last accessed August 2022).
 54. Ford Media Release, 2022 New Study Finds Greater Greenhouse Gas Reductions for Pickup Trucks than for other light duty vehicles. March 4, 2022 (web link: <https://media.ford.com/content/fordmedia/fna/us/en/news/2022/03/04/new-study-finds-greater-greenhouse-gas-reductions-for-pickup-tru.html>, last accessed January, 2023).
 55. Ford Press Release. November 12, 2020. Leading The Charge: All-Electric Ford E-Transit Powers The Future Of Business With Next-Level Software, Services And Capability (web link: <https://media.ford.com/content/fordmedia/fna/us/en/news/2020/11/12/all-electric-ford-e-transit.html>, last accessed February 24, 2023).
 56. Ford, F-150® Lightning™, 2023 (web link: <https://www.ford.com/trucks/f150/f150-lightning/2022/>, last accessed February 2023).
 57. Ford, E-transit, 2023 (web link: <https://media.ford.com/content/fordmedia/fna/us/en/products/evs/e-transit/2022-ford-e-transit.html>, last accessed February 2023).
 58. Ford, Ford's new science-based, Interim Carbon-Neutral Targets Highlight First Integrated Sustainability, Financial Report, March 31, 2021 (web link: <https://media.ford.com/content/fordmedia/fna/us/en/news/2021/03/31/ford-integrated-sustainability-financial-report.html>, last accessed January 2023).
 59. General Motors, BrightDrop-Electric first to last mile delivery products, 2023 (web link: <https://www.gobrightdrop.com/>, last accessed February 2023).
 60. GMC, Sierra Ev Denali Edition 1, 2023 (web link: <https://www.gmc.com/future-vehicles/sierra-ev-denali>, last accessed February 2023).
 61. Health and Safety Executive. Fuel Cells: Understand the Hazards, Control the Risks. First edition, published in 2004. (web link: www.thenbs.com/PublicationIndex/documents/details?Pub=HSE&DocID=278597, last accessed May 2022).

62. Houbbadi A, Trigui R, Pelissier S, Redondo-Iglesias E, Bouton T. Optimal Scheduling to Manage an Electric Bus Fleet Overnight Charging. *Energies*. 2019; 12(14):2727. (web link: <https://doi.org/10.3390/en12142727>, last accessed February 2023).
63. Kelly, J.C., Dai, Q. & Wang. Globally regional life cycle analysis of automotive lithium-ion nickel manganese cobalt batteries, 371–396, 2020. (web link: <https://link.springer.com/content/pdf/10.1007/s11027-019-09869-2.pdf>, last accessed March 2022).
64. Klein, P. S., & Schiffer, M. (2022). Electric vehicle charge scheduling with flexible service operations. Ithaca: Cornell University Library, arXiv.org, 2022 (web link: <https://arxiv.org/pdf/2201.03972.pdf>, last accessed February 2023).
65. Kosai, S.; Takata, U.; Yamasue, E. Global Resource Circularity for Lithium-Ion Batteries up to 2050: Traction and Stationary Use. *Mining*. 449–462. June 30, 2022 (web link: <https://doi.org/10.3390/mining2030024>, last accessed August 2022).
66. Government of Canada, Memorandum of Cooperation between the Government of Canada and the Government of the State of California of the United States of America concerning Climate Action and Nature Protection, 2022 (web link: <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/reduce-emissions/memorandum-cooperation-canada-california-climate-action-nature-protection.html>, last accessed August 2022).
67. Green Car Reports, Aqua Metals produces high-purity LiOH directly from recycled lithium-ion batteries, February 23, 2023 (web link: <https://www.greencarcongress.com/2023/02/20230223-aqua.html>, last accessed February 2023).
68. The International Council on Clean Transportation, Analysing the Impact of the Inflation Reduction Act on Electric Vehicle Uptake in the United States, 2023 (web link: <https://theicct.org/wp-content/uploads/2023/01/ira-impact-evs-us-jan23.pdf>, last accessed February 2023).
69. The International Council on Clean Transportation, February 2023. A Comparison of the Greenhouse Gas Emissions of European Heavy-Duty Vehicles and Fuels. (web link: <https://theicct.org/wp-content/uploads/2023/02/lca-ghg-emissions-hdv-fuels-europe-feb23.pdf>, last accessed February 2023).
70. The International Council on Clean Transportation, A meta-study on purchase costs for zero-emission trucks, 2022 (web link: <https://theicct.org/wp-content/uploads/2022/02/purchase-cost-ze-trucks-feb22-1.pdf>, last accessed March 2023).
71. The International Council on Clean Transportation, Purchase costs of zero-emission trucks in the United States to meet future Phase 3 GHG standards, 2023 (web link: <https://theicct.org/wp-content/uploads/2023/02/cost-zero-emission-trucks-us-phase-3-mar23.pdf>, last accessed March 2023).
72. International Energy Agency. Comparative life-cycle greenhouse gas emissions of a mid-size BEV and ICE vehicle, October 26, 2022 (web link:

- <https://www.iea.org/data-and-statistics/charts/comparative-life-cycle-greenhouse-gas-emissions-of-a-mid-size-bev-and-ice-vehicle>, last accessed January, 2023).
73. Leonard et al. January 2023. In-Use Emissions Testing and Activity Profiles for On-Road Heavy-Duty Vehicles: Summary of 200 Heavy-Duty Vehicle Emissions Testing Program from the University of California, Riverside and West Virginia University (web link: <https://www.energy.ca.gov/publications/2023/use-emissions-testing-and-activity-profiles-road-heavy-duty-vehicles-summary-200>, last accessed March 2023).
 74. Loomis, Loomis orders 150 electric armored vehicles from Xos for the US market, 2023 (web link: <https://www.loomis.us/resources/press-releases-news/Loomis-orders-150-electric-armored-vehicles>, last accessed 2023).
 75. Mareev, Ivan, Jan Becker, and Dirk Sauer. "Battery Dimensioning and Life Cycle Costs Analysis for a Heavy-Duty Truck Considering the Requirements of Long-Haul Transportation." *Energies (Basel)* 11.1 (2017): 55. (web link: <https://www.mdpi.com/1996-1073/11/1/55>, last accessed February 2023).
 76. McKinsey, Preparing the World for Zero-Emission Trucks, 2022 (web link: https://www.mckinsey.com/~/_media/mckinsey/industries/automotive%20and%20assembly/our%20insights/preparing%20the%20world%20for%20zero%20emission%20trucks/preparing-the-world-for-zero-emission-trucks-f.pdf, last accessed March 2023).
 77. Moving Forward Network, Zero-Emissions Technology for Freight: Heavy-Duty Trucks, 2020 (web link: https://www.movingforwardnetwork.com/wp-content/uploads/2020/10/MFN_ZeroEmissionToolkit-1.pdf, last accessed March 2023).
 78. Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding. 2020 (web link: https://www.energy.ca.gov/sites/default/files/2020-08/Multistate-Truck-ZEV-Governors-MOU-20200714_ADA.pdf, last accessed August 2022).
 79. National Renewable Energy Laboratory, Investigation of Emissions Impacts from Hybrid Powertrains, January 2020 (web link: <https://www.nrel.gov/docs/fy20osti/75782.pdf>, last accessed January 2023).
 80. National Renewable Energy Laboratory, BAE/Orion Hybrid Electric Buses at New York City Transit, 2008 (web link: <https://afdc.energy.gov/files/pdfs/42217.pdf>, last accessed January 2022).
 81. Navistar, Vision And Strategy, 2023 (web link: <https://www.navistar.com/about-us/vision-strategy>. last accessed February 2023).
 82. North American Council for Freight Efficiency, Electric Trucks Have Arrived: The Use Case for Vans and Step Vans, 2022 (weblink: <https://nacfe.org/wp-content/uploads/edd/2022/04/Vans-and-Step-Vans-Report-FINAL.pdf>, last accessed March 2023)
 83. North American Council for Freight Efficiency, Guidance Report: Medium-Duty Electric Trucks Cost of Ownership, 2018 (web link: <https://nacfe.org/wp->

- content/uploads/2018/10/medium-duty-electric-trucks-cost-of-ownership.pdf, last accessed August 2022).
84. North American Council for Freight Efficiency, Guidance Report: Electric Trucks- Where They Make Sense, 2018 (web link: <https://nacfe.org/downloads/full-report-electric-trucks/>, last accessed August 2022).
 85. Nissan Press Release, Nissan among the first to trial all-electric, heavy-duty trucks for new vehicle deliveries, February 24, 2023 (web link: <https://electrek.co/2023/02/24/nissan-is-now-using-heavy-duty-electric-trucks-to-deliver-evs/>, last accesses February, 2023).
 86. Office of Attorney General website on protecting consumers and utilities (web link: <https://oag.ca.gov/consumers/general/utilities>, last accessed February 2023).
 87. Office of Planning and Research. 2013. Zero-Emission Vehicles in California: Community Readiness Guidebook: Toward 1.5 Million Zero-Emission Vehicles on California Roadways by 2025. (web link: https://opr.ca.gov/docs/ZEV_Guidebook.pdf, last accessed February 2023).
 88. Paz, Silvia (Chair); Kelley, Ryan E. (Vice Chair); Castaneda, Steve; Colwell, Rod; Dolega, Roderic; Flores, Miranda; Hanks, James C.; Lopez, Arthur; Olmedo, Luis; Reynolds, Alice; Ruiz, Frank; Scott, Manfred; Soto, Tom; Weisgall, Jonathan., Report of the Blue Ribbon Commission on Lithium Extraction in California. California Energy Commission. Publication Number: CEC-300-2022-009-D, Dec 2022 (web link: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=247861&DocumentContentId=82166>, last accessed March 2022).
 89. Regional Electric Vehicle Midwest Coalition, Memorandum of Understanding Between Illinois, Indiana, Michigan, Minnesota, and Wisconsin, 2021 (web link: [https://www.michigan.gov/-/media/Project/Websites/leo/REV_Midwest_MOU_master.pdf?rev=6dd781b5a4eb4551b3b3a5b875d67fb9#:~:text=THIS%20MEMORANDUM%20OF%20UNDERSTANDING%20\(%E2%80%9CMOU,the%20%E2%80%9CParticipating%20States%E2%80%9D](https://www.michigan.gov/-/media/Project/Websites/leo/REV_Midwest_MOU_master.pdf?rev=6dd781b5a4eb4551b3b3a5b875d67fb9#:~:text=THIS%20MEMORANDUM%20OF%20UNDERSTANDING%20(%E2%80%9CMOU,the%20%E2%80%9CParticipating%20States%E2%80%9D), last accessed August 2022).
 90. PNNL 2020. Kintner-Meyer, Michael, et al, Electric Vehicles at Scale – Phase I Analysis: High EV Adoption Impacts on the Western U.S. Power Grid. Pacific Northwest National Laboratory, 2020 (web link: https://www.pnnl.gov/sites/default/files/media/file/EV-AT-SCALE_1_IMPACTS_final.pdf, last accessed August 2022).
 91. Rocky Mountain Institute, The Inflation Reduction Act Will Help Electrify Heavy-Duty Trucking, 2022 (web link: <https://rmi.org/inflation-reduction-act-will-help-electrify-heavy-duty-trucking/>, last accessed January 2023).
 92. Roush, Inflation Reduction Act 2022 Impact Study, 2022 (web link: <https://blogs.edf.org/climate411/files/2022/09/2022-09-EDF-Roush-IRA-MHD-Final-1.pdf>, last accessed January 2023).

93. Sharma and Marechal. Carbon Dioxide Capture From Internal Combustion Engine Exhaust Using Temperature Swing Adsorption Front. *Energy Res.*, 16 December 2019 Sec. Carbon Capture, Utilization and Storage Volume 7 - 2019 | <https://doi.org/10.3389/fenrg.2019.00143> (web link: <https://www.frontiersin.org/articles/10.3389/fenrg.2019.00143/full>, last accessed February 2023).
94. Terex, Terex Utilities Debuts Industry's First All Electric Bucket Truck, 2023 (web link: <https://www.terex.com/utilities/en/about/news/terex-utilities-debuts-industry-s-first-all-electric-bucket-truck>, last accessed February 2023).
95. Transport Canada, ZE vehicles, 2022, (web link: <https://tc.canada.ca/en/road-transportation/innovative-technologies/ZE-vehicles>, last accessed August 2022).
96. Transportation Decarbonisation Alliance, TDA Members, 2022 (web link: <https://tda-mobility.org/tda-members/>, last accessed August 2022).
97. Transport Topics, New Mexico to be Part of 'Clean Freight Corridor', September 2022 (web link: <https://www.ttnews.com/articles/new-mexico-be-part-clean-freight-corridor>, last accessed February 2023).
98. United States Department of Energy (DoE), Biden-Harris Administration Announces Funding for ZE Medium- and Heavy-Duty Vehicle Corridors, Expansion of EV Charging in Underserved Communities, 2023. (web link: <https://content.govdelivery.com/accounts/USEERE/bulletins/348f531>, last accessed February 2023).
99. U.S. DoE, Memorandum of Understanding Between the U.S. Department Of Energy, The U.S. Department Of Transportation, The U.S. Environmental Protection Agency, And The U.S. Department Of Housing And Urban Development, 2022 (web link: https://www.energy.gov/sites/default/files/2022-09/mou-doe-dot-epa-hud-final_09-15-2022.pdf, last accessed February 2023).
100. U.S. DoE, Fuel Cell and Battery Electric Vehicles Compared, 2014 (web link: https://www.energy.gov/sites/default/files/2014/03/f9/thomas_fcev_vs_battery_evs.pdf, last accessed August 2022).
101. U.S. DoE. Loan Programs Office. February 9, 2023. Press Release announcing a conditional loan commitment of \$2 billion to Redwood Materials for the construction and expansion of a battery materials campus in McCarran, Nevada, February 9, 2023 (web link: <https://www.energy.gov/lpo/articles/lpo-offers-conditional-commitment-redwood-materials-produce-critical-electric-vehicle>, last accessed February 2022).
102. U.S. Department of Transportation. Rural EV Toolkit, (web link: <https://www.transportation.gov/rural/ev/toolkit/ev-basics/charging-speeds>, last accessed February 2023).
103. U.S. Environmental Protection Agency, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards, 2023 (web link: <https://www.federalregister.gov/documents/2023/01/24/2022-27957/control-of-air>

- pollution-from-new-motor-vehicles-heavy-duty-engine-and-vehicle-standards, last accessed February 2023).
104. United Parcel Service, UPS invests in Arrival, accelerates fleet electrification with a commitment to purchase up to 10,000 electric vehicles, January 29, 2020 (web link: <https://about.ups.com/ca/en/newsroom/press-releases/sustainable-services/ups-invests-in-arrival-accelerates-fleet-electrification-with-order-of-10-000-electric-delivery-vehicles.html>, last accessed August 2022).
 105. USPS Places Order for 50,000 Next Generation Delivery Vehicles; 10,019 To Be Electric, March 24, 2022 (web link: <https://about.usps.com/newsroom/national-releases/2022/0324-usps-places-order-for-next-gen-delivery-vehicles-to-be-electric.htm>, last accessed August 2022).
 106. Visnic, Bill. "GM's Ultium Battery System Future-Proofed." SAE International. May 2020 (web link: <https://www.sae.org/news/2020/05/gm-ultium-battery-update>, last accessed March 2022).
 107. Walmart, Walmart To Purchase 4,500 Canoo Electric Delivery Vehicles To Be Used for Last Mile Deliveries in Support of Its Growing eCommerce Business, July 12, 2022 (web link: <https://corporate.walmart.com/newsroom/2022/07/12/walmart-to-purchase-4-500-canoo-electric-delivery-vehicles-to-be-used-for-last-mile-deliveries-in-support-of-its-growing-ecommerce-business>, last accessed August 2022).
 108. Western Uranium & Vanadium Corp, Announces Utah Processing Plant. Press Release, January 23, 2023 (web link: https://www.western-uranium.com/news/WUC_Press_Release_Jan_23_2023.pdf, last accessed February 2022).
 109. WorkTruck, Con Edison, Lion Electric, and Posi-Plus Developing Electric Bucket Truck, 2021 (web link: <https://www.worktruckonline.com/10139523/electric-utility-bucket-truck-makes-clean-energy-breakthrough>, last accessed February 2023). ZEV Transition Council, 2022 (web link: <https://zevtc.org/the-council/members/>, last accessed August 2022).
 110. CPUC. "Electricity Rates and Cost of Fueling." California Public Utilities Commission, 2021 (web link: <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/transportation-electrification/electricity-rates-and-cost-of-fueling>, last accessed March 9, 2023).
 111. Muratori et al 2021. Matteo Muratori et al, "The rise of electric vehicles—2020 status and future expectations," 2021 (web link: <https://iopscience.iop.org/article/10.1088/2516-1083/abe0ad/pdf>, last accessed March 9, 2023).
 112. Pacific Northwest National Laboratory 2020. Kintner-Meyer, Michael, et al, Electric Vehicles at Scale – Phase I Analysis: High EV Adoption Impacts on the Western U.S. Power Grid. Pacific Northwest National Laboratory, 2020 (web link: https://www.pnnl.gov/sites/default/files/media/file/EV-AT-SCALE_1_IMPACTS_final.pdf, last accessed March 9, 2023).

113. US DRIVE. Summary Report on EVs at Scale and the U.S. Electric Power System. U.S. Driving Research and Innovation for Vehicle Efficiency and Energy Sustainability (DRIVE), 2019 (web link: <https://www.energy.gov/eere/vehicles/articles/summary-report-evs-scale-and-us-electric-power-system-2019>, last accessed March 9, 2023).
114. Freightwaves. Hyliion plans bigger battery to stay relevant in electric truck race. August 5, 2021. (web link: <https://www.freightwaves.com/news/hyliion-plans-bigger-battery-to-stay-relevant-in-electric-truck-race>, last accessed March 2023).
115. Plug-In Hybrid Medium Duty Truck Demonstration and Evaluation. EPRI, Palo Alto, CA: 2015. 3002006566. (web link: <https://www.energy.ca.gov/sites/default/files/2021-05/CEC-600-2020-010.pdf>, last accessed March 2023).
116. Daimler Truck Press Release. Daimler Truck North America, NextEra Energy Resources and BlackRock Renewable Power Announce Plans To Accelerate Public Charging Infrastructure For Commercial Vehicles Across The U.S. January 2022. (web link: <https://media.daimlertruck.com/marsMediaSite/en/instance/ko/Daimler-Truck-North-America-NextEra-Energy-Resources-and-BlackRock-Renewable-Power-Announce-Plans-To-Accelerate-Public-Charging-Infrastructure-For-Commercial-Vehicles-Across-The-US.xhtml?oid=51874160>, last accessed March 2023).
117. Volvo Press Release. Volvo Trucks Constructing California Electrified Charging Corridor for Medium- and Heavy-Duty Electric Vehicles, July 2022. (weblink: <https://www.volvotrucks.us/news-and-stories/press-releases/2022/july/constructing-california-electrified-charging-corridor-for-medium-and-heavy-duty-electric-vehicles/>, last accessed March 2023).
118. Flying J Press Release. Pilot Company and Volvo Group Partner to Build Charging Network for Medium- and Heavy-Duty Electric Trucks (web link: <https://pilotflyingj.com/press-release/20462>, last accessed March 2023).
119. Albuquerque Journal. NM to be part of 'clean freight corridor', September 2022 web link: <https://www.abqjournal.com/2535134/nm-to-be-part-of-clean-freight-corridor.html>, last accessed March 2023).
120. Forbes. Nikola To Run Hydrogen Production, Fuel Cell Truck Stations Under 'HYLA' Brandy. January 2023 (web link: <https://www.forbes.com/sites/alanohnsman/2023/01/25/nikola-to-run-hydrogen-production-fuel-cell-truck-stations-under-hyla-brand/?sh=61bea4c32612>, last accessed March 2023).
121. Flying J Press Release. GM and Pilot Company to Build Out Coast-to-Coast EV Fast Charging Network (web link: <https://pilotflyingj.com/press-release/19335>, last accessed March 2023).
122. Electrify America Press Release. Electrify America and NFI Industries Collaborate on Nation's Largest Heavy-Duty Electric Truck Charging Infrastructure Project

- August 2021 (web link: <https://media.electrifyamerica.com/en-us/releases/156>, last accessed March 2023).
123. Prologis Press Release. Prologis Announces Major EV Truck Installations in Southern California November 2022 (web link: <https://www.prologis.com/news-research/press-releases/prologis-announces-major-ev-truck-installations-southern-california>, last accessed March 2023).
 124. Business Wire Press Release. TeraWatt Developing I-10 Electric Corridor, the First Network of Electric Heavy-Duty Charging Centers, October 2022 (web link: <https://www.businesswire.com/news/home/20221020005252/en/TeraWatt-Developing-I-10-Electric-Corridor-the-First-Network-of-Electric-Heavy-Duty-Charging-Centers/>, last accessed March 2023).
 125. InsideEVs News. Nikola Gets Order For 10 Nikola Tre With An Option For Up To 100, December 2021. (web link: <https://insideevs.com/news/556723/nikola-tre-loi-100-trucks/>, last accessed March 2023).
 126. WattEV. WattEV Breaks Ground on 21st Century Truck Stop, December 2021. (web link: <https://www.wattev.com/post/wattev-breaks-ground-on-21st-century-truck-stop>, last accessed March 2023).
 127. WattEV. WattEV To Electrify TTSI Heavy-Duty Truck Fleet. July 2021 (web link: <https://www.wattev.com/post/wattev-to-electrify-ttsi-heavy-duty-truck-fleet>, last accessed March 2023).
 128. WattEV. WattEV to Provide 20 Zero-Emission Trucks to Major Shipping and Logistics Partner, December 2022(web link: <https://www.wattev.com/post/wattev-to-provide-20-zero-emission-trucks-to-major-shipping-and-logistics-partner>, last accessed March 2023).
 129. FreightWaves. Einride EV truck network to launch near Port of LA, November 2022. (web link: <https://www.freightwaves.com/news/einride-to-build-ev-truck-charging-facility-near-port-of-la>, last accessed March 2023).
 130. Daimler Truck Press Release. Highland Electric Fleets and Thomas Built Buses Sign Agreement to Make Electric School Buses an Affordable Option Today, March 2022 (web link: <https://northamerica.daimlertruck.com/PressDetail/highland-electric-fleets-and-thomas-built-2022-03-17>, last accessed March 2023).
 131. Electrify.com. Highland Electric Fleets coordinates V2G programme with electric school buses, August 2022 (web link: <https://www.electrify.com/2022/08/28/highland-electric-fleets-coordinates-v2g-programme-with-electric-school-buses/>, last accessed March 2023).
 132. Volvo Press Release – North America. Mack Launches Vehicle-as-a-Service (VaaS) Program for Battery Electric Vehicles, February 2022 (web link: <https://www.volvogroup.com/en/news-and-media/news/2022/feb/mack-launches-vehicle-as-a-service-vaas-program-for-battery-electric-vehicles.html>, last accessed March 2023).
 133. FleetOwner. Zeem’s electric FaaS helps fleet meet customers’ zero-emission needs, December 2022 (web link: <https://www.fleetowner.com/emissions->

- efficiency/article/21256088/fleet-finds-ways-to-meet-shippers-zeroemission-needs-with-zeems-ev-fleet-as-a-service, last accessed March 2023).
134. Business Wire. Zeem Solutions Launches First Electric Vehicle Transportation-As-A-Service Depot, March 2022(web link: <https://www.businesswire.com/news/home/20220330005269/en/Zeem-Solutions-Launches-First-Electric-Vehicle-Transportation-As-A-Service-Depot>, last accessed March 2023).
 135. Air Liquide Press Release. Air Liquide and TotalEnergies join forces to develop a network of over 100 hydrogen stations for heavy duty vehicles in Europe, February 2023 (web link: <https://www.airliquide.com/group/press-releases-news/2023-02-02/air-liquide-and-totalenergies-join-forces-develop-network-over-100-hydrogen-stations-heavy-duty>, last accessed March 2023).
 136. BP Global Press Release. bp pulse builds Europe’s first public charging corridor for electric trucks along major logistics route, January 2023 (web link: <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-pulse-build-europes-first-public-charging-corridor-for-electric-trucks-along-major-logistics-route.html>, last accessed March 2023).
 137. Trib Live, Pittsburgh's green fleet bolstered by 9 electric vehicles, including bucket truck, May 15, 2021 (web link: <https://triblive.com/local/electric-bucket-truck-coming-to-pittsburgh-thanks-to-electric-vehicles-grant-money/>, last accessed March 2023).
 138. International Cranes, New fully electric Böcker truck crane and work platform, September 7, 2022 (web link: <https://www.internationalcranes.media/news/New-fully-electric-Bocker-truck-crane-and-work-platform/8023128.article>, last accessed March 2023).
 139. PR Newswire, Zoomlion Produces the World's First Pure Electric Truck Crane, Takes the Lead in Environmental Protection Construction in Machinery Industry, May 2020 (web link: <https://www.prnewswire.com/in/news-releases/zoomlion-produces-the-world-s-first-pure-electric-truck-crane-takes-the-lead-in-environmental-protection-construction-in-machinery-industry-838304210.html>, last accessed March 2023).
 140. Plant and Equipment News, The World’s First Licensable Electric Truck Crane From SANY, June 28, 2021 (web link: <https://www.plantandequipment.news/news/product-updates/the-worlds-first-licensable-electric-truck-crane-from-sany/>, last accessed March 2023).
 141. Heavy Lift News, The XCT25_EV Plug-In, Double Drive Hybrid Crane from XCMG, December 6, 2021 (web link: https://www.heavyliftnews.com/the-xct25_ev-plug-in-double-drive-hybrid-crane-from-xcmg/, last accessed March 2023).
 142. Scania, First fully electric crane truck for waste collection in Denmark, January 18, 2023 (web link: https://www.scania.com/group/en/home/newsroom/news/2023/first_fully_electric_crane_truck_for_waste_collection_in_denmark.html, last accessed March 2023).

143. Electrek, Tesla Semi electric trucks to power log-hauling program in Canada, April 8, 2021 (web link: <https://electrek.co/2021/04/08/tesla-semi-electric-trucks-power-log-hauling-program-canada/>, last accessed March 2023).
144. TU Automotive, Scania Goes Logging with New 80-ton BEV Truck, November 11, 2021 (web link: <https://www.tu-auto.com/scania-goes-logging-with-new-80-ton-bev-truck/>, last accessed March 2023).
145. Mining Digital, Leading companies power polar electric truck trial, November 16, 2021 (web link: <https://miningglobe.com/sustainability/leading-companies-power-polar-electric-truck-trial>, last accessed March 2023).
146. UK Haulier, Fox Group first in the UK for Volvo FE Electric Tippers, November 16, 2021 (web link: <https://www.ukhaulier.co.uk/news/road-transport/fleet/fox-group-first-in-the-uk-for-volvo-fe-electric-tippers/>, last accessed March 2023).
147. Electrive, Renault Trucks launches first construction BEV, March 3, 2021 (web link: <https://www.electrive.com/2021/03/03/renault-trucks-launches-first-construction-bev/>, last accessed March 2023).
148. Scania, Scania at IFAT 2022 in Munich, May 31, 2021 (web link: <https://www.scania.com/group/en/home/newsroom/press-releases/press-release-detail-page.html/4278090->, last accessed March 2023).
149. Motor Transport, Volvo to showcase FE-Electric 6x2 hook-lift rigid at Freight in the City Expo on 6 November, October 29, 2019 (web link: <https://motortransport.co.uk/blog/2019/10/29/volvo-to-showcase-fe-electric-6x2-hook-lift-rigid-at-freight-in-the-city-expo-on-6-november/>, last accessed March 2023).
150. American Journal of Transportation, ZF and Mercedes-Benz trucks showcase silent, emission-free eWorX power take-off for electric TrucksZF, May 25, 2022 (web link: <https://ajot.com/news/zf-and-mercedes-benz-trucks-showcase-silent-emission-free-eworx-power-take-off-for-electric-truckszf>, last accessed March 2023).
151. Recycling Lives, UK's first electric skip trucks to hit the roads (web link: <https://www.recyclinglives.com/news/general/first-uk-electric-skip-truck>, last accessed March 2023).
152. Electrive, Unicon & Volvo Trucks collaborate on electric concrete mixers, February 14, 2022 (web link: <https://www.electrive.com/2022/02/14/unicon-volvo-trucks-collaborate-on-electric-concrete-mixers/>, last accessed March 2023).
153. Electrive, Futuricum delivers 3 concrete mixer e-trucks to Holcim, January 19, 2021 (web link: <https://www.electrive.com/2021/01/19/futuricum-delivers-three-electric-concrete-mixer-trucks-to-holcim/>, last accessed March 2023).
154. Concrete Products, National Cement parent drives carbon emissions-free mixer project, May 15, 2018 (web link: <http://concreteproducts.com/index.php/2018/05/15/national-cement-parent-drives-carbon-emissions-free-mixer-project/>, last accessed March 2023).
155. Liebherr, First fully electric 10 and 12 m³ truck mixers from Liebherr and Designwerk, March 26, 2020 (web link: <https://www.liebherr.com/en/deu/latest->

- news/news-press-releases/detail/first-fully-electric-10-and-12-m3-truck-mixers-from-liebherr-and-designwerk.html, last accessed March 2023).
156. PR Newswire, SANY battery electric truck mixers: when traditional concrete mixing goes green, September 27, 2020 (web link: <https://www.prnewswire.com/news-releases/sany-battery-electric-truck-mixers-when-traditional-concrete-mixing-goes-green-301138618.html>, last accessed March 2023).
 157. Driven, New Zealand set to get first electric milk tanker after government funding boost, February 24, 2022 (web link: <https://www.driven.co.nz/news/new-zealand-set-to-get-first-electric-milk-tanker-after-government-funding-boost/>, last accessed March 2023).
 158. Electrive, Tarmac orders electric mixer truck from Renault Trucks, June 30, 2022 (web link: <https://www.electrive.com/2022/06/30/tarmac-orders-electric-mixer-truck-from-renault-trucks/>, last accessed March 2023).
 159. Lectura Press, Putzmeister launches the first zero-emissions truck-mounted concrete pump, August 23, 2022 (web link: <https://lectura.press/en/article/putzmeister-launches-the-first-zero-emissions-truck-mounted-concrete-pump/59003>, last accessed March 2023).
 160. Spanos, ENERGYA K42E: The new battery electric driven truck pump from CIFA, November 1, 2022 (web link: <http://www.spanos-group.com/energya-k42e-new-battery-electric-driven-concrete-truck-pump-cifa/>, last accessed March 2023).
 161. PR Newswire, Zeus Electric Chassis Redefines The Fire Truck With New All-Electric Design, August 4, 2021 (web link: <https://www.prnewswire.com/news-releases/zeus-electric-chassis-redefines-the-fire-truck-with-new-all-electric-design-301348659.html>, last accessed March 2023).
 162. Oshkosh Airport Products, Striker® Volterra™, 2023 (web link: <https://www.oshkoshairport.com/innovations/striker-volterra>, last accessed March 2023).
 163. Rosenbauer, Revolutionary Technology - Electric municipal vehicles, 2023 (web link: <https://www.rosenbauer.com/en/int/rosenbauer-world/vehicles/municipal-vehicles/rt>, last accessed March 2023).
 164. Electrive, Basel orders 4 electric fire trucks from Rosenbauer, November 1, 2021 (web link: <https://www.electrive.com/2021/11/01/basel-orders-4-electric-fire-trucks-from-rosenbauer/>, last accessed March 2023).
 165. The Big Red Guide, Rosenbauer Showcases The First PANTHER 6x6 With Electric Driveline At Interschutz 2022, June 20, 2022 (web link: <https://www.thebigredguide.com/news/rosenbauer->, last accessed March 2023).
 166. Emergency One, E1 EV The Worlds First Fully Electric Fire Engine, 2023 (web link: <https://e1group.co.uk/e1-evo>, last accessed March 2023).
 167. Electrek, UK's NHS unveils new hydrogen-electric ambulances at COP26, November 2, 2021 (web link: <https://electrek.co/2021/11/02/uks-nhs-unveils-new-hydrogen-electric-ambulances-at-cop26/>, last accessed March 2023).

168. West Midlands Ambulance Service, WMAS launches the first 100% electric emergency ambulance in the UK, October 1, 2020 (web link: <https://wmas.nhs.uk/2020/10/01/wmas-launches-the-first-100-electric-ambulance-in-the-uk/>, last accessed March 2023).
169. Electrive, Zerro: First hydrogen ambulance with fuel cell Rex, February 13, 2021 (web link: <https://www.electrive.com/2021/02/13/zerro-londons-first-hydrogen-ambulance-with-fuel-cell-rex/>, last accessed March 2023).
170. Toyota, Japanese Red Cross Kumamoto Hospital and Toyota to Begin Utilization Demonstration of the World's First Fuel Cell Electric Vehicle Mobile Clinic, March 31, 2021 (web link: <https://global.toyota/en/newsroom/corporate/35008661.html>, last accessed March 2023).
171. Daily Mail, Transit vans will be turned into £100k electric ambulances to slash NHS' carbon footprint and fuel bills, August 2021 (web link: <https://www.dailymail.co.uk/news/article-9874973/Transit-vans-turned-electric-ambulances-slash-NHS-carbon-footprint-fuel-bills.html>, last accessed March 2023).
172. Green Car Reports, Nissan electric ambulance curbs the tailpipe emissions, May 20, 2020 (web link: https://www.greencarreports.com/news/1128219_nissan-electric-ambulance-curbs-the-tailpipe-emissions, last accessed March 2023).
173. Sustainability Times, A New Ambulance Made In Denmark Has Gone All Electric, January 19, 2019 (web link: <https://www.sustainability-times.com/sustainable-business/a-new-ambulance-made-in-denmark-has-gone-all-electric/>, last accessed March 2023).
174. Electrek, Lightning eMotors and REV to produce electric ambulances, April 15, 2021 (web link: <https://electrek.co/2021/04/15/lightning-emotors-and-rev-to-produce-electric-ambulances/>, last accessed March 2023).
175. PR Newswire, Demers Ambulances and Lion Electric Launch All-electric, Purpose-Built Ambulance, October 18, 2021 (web link: <https://www.prnewswire.com/news-releases/demers-ambulances-and-lion-electric-launch-all-electric-purpose-built-ambulance-301402381.html>, last accessed March 2023).
176. Automotive World, Mercedes-Benz Vans is electrifying ambulance vehicles, March 26, 2021 (web link: <https://www.automotiveworld.com/news-releases/mercedes-benz-vans-is-electrifying-ambulance-vehicles/>, last accessed March 2023).
177. Vehicle Conversion Specialists, CS launches UK's first all-electric front-line ambulance, September 2022 (web link: <https://www.vcs-limited.com/vcs-launches-uks-first-all-electric-front-line-ambulance/>, last accessed March 2023).
178. Firehouse, AMR Awards Electric Ambulance Order to REV Group Company, December 2021 (web link: <https://www.firehouse.com/apparatus/press-release/21248621/rev-fire-group-amr-awards-electric-ambulance-order-to-rev-group-company>, last accessed March 2023).
179. EMS1. REV announces alternative-fuel ambulance deals with AMR, U.S. government, Qatar nonprofit, December 2021 (web link: <https://www.ems1.com/ems-products/ambulances/articles/rev-announces->

- alternative-fuel-ambulance-deals-with-amr-us-government-qatar-nonprofit-1qJgQO4WPIR09i9Q/, last accessed March 2023).
180. New York City. Climate Week: City Announces \$75 Million in new Investments for Electric Vehicles and Electric Vehicle Charging Infrastructure, September 2021 (web link: <https://www1.nyc.gov/office-of-the-mayor/news/639-21/climate-week-city-75-million-new-investments-electric-vehicles-electric>, last accessed March 2023).
 181. Andretti Group. Newly Introduced Hydrogen Fuel Cell Tow Trucks, November 2022 (web link: <https://andretti1.com/hydrogen-fuel-cell-tow-trucks/>, last accessed March 2023).
 182. Hyzon Press Release. Hyzon Motors to Establish Australian Headquarters, 2022 (web link: <https://www.racv.com.au/content/dam/racv/documents/about-racv/our-business/newsroom/racv-press-release-hyzon-motors-jan-22.pdf>, last accessed March 2023).
 183. The Scotsman. World-first electric gritter to clear snow on Queensferry Crossing, February 2019 (web link: <https://www.scotsman.com/news/transport/world-first-electric-gritter-clear-snow-queensferry-crossing-852725>, last accessed March 2023).
 184. Electrek. Ford Mustang Mach-E passes Michigan State Police test, September 2021 (web link: <https://electrek.co/2021/09/24/ford-mustang-mach-e-passes-michigan-state-police-test/>, last accessed March 2023).
 185. GM Authority. 2022 Chevy Bolt EUV And Bolt EV Get Police Package, June 2021 (web link: <https://gmauthority.com/blog/2021/06/2022-chevy-bolt-euv-and-bolt-ev-get-police-package/#:~:text=The%20new%20police%20packages%20for,the%20interior%20and%20exterior%20lights>, last accessed March 2023).
 186. PRWeb Press Release. ROUSH CleanTech and First Priority Group Collaborate to Create Electric Emergency Response Vehicles, April 2021 (web link: https://www.prweb.com/releases/roush_cleantech_and_first_priority_group_collaborate_to_create_electric_emergency_response_vehicles/prweb17873992.htm, last accessed March 2023).
 187. CleanTechnica. Tesla Police Vehicle Brings Huge Monetary Savings To Westport, Connecticut, June 2021 (web link: <https://cleantechnica.com/2021/06/02/tesla-police-vehicle-brings-huge-monetary-savings-to-westport-connecticut/>, last accessed March 2023).
 188. Electrek. Police chief explains how Tesla Model Y patrol car will save them \$80,000, February 2023 (web link: <https://electrek.co/2023/02/06/police-chief-explains-tesla-model-y-patrol-car-will-save/>, last accessed March 2023).
 189. California Department of Finance. Economic Research Unit. National Economic Forecast – Annual & Quarterly. Sacramento: California. November 2022.
 190. California Department of Finance. Economic Research Unit. California Economic Forecast – Annual & Quarterly. Sacramento: California. November 2022.

191. California Department of Finance. Economic Research Unit. National Deflators: Calendar Year averages: from 1929, April 2021. Sacramento: California. November 2022.
192. California Energy Commission. 2022 Transportation Fuel Price Forecast. January 5, 2023.
193. CARB. Current Fuel Pathways Table last updated 2/28/2023. (web link: <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>, last accessed March 2023).
194. Ford Media. Ford Taps Michigan For New LFP Battery Plant; New Battery Chemistry Offers Customers Value, Durability, Fast Charging, Creates 2,500 More New American Jobs, February 2023 (web link: <https://media.ford.com/content/fordmedia/fna/us/en/news/2023/02/13/ford-taps-michigan-for-new-lfp-battery-plant--new-battery-chemis.html>, last accessed March 2023).
195. CNBC. Ford to move forward with \$3.5 billion EV battery plant with Chinese company, February 2023 (web link: <https://www.cnbc.com/2023/02/13/ford-ev-battery-plant-china-catl.html>, last accessed March 2023).
196. DoE. Electric Vehicle Battery Manufacturing Capacity in North America in 2030 is Projected to be Nearly 20 Times Greater than in 2021, January 2023 (web link: <https://www.energy.gov/eere/vehicles/articles/fotw-1271-january-2-2023-electric-vehicle-battery-manufacturing-capacity>, last accessed March 2023).
197. NPR Business. After years of decline, the auto industry in Canada is making a comeback, March 2023 (web link: <https://www.npr.org/2023/03/12/1129639900/after-years-of-decline-the-auto-industry-in-canada-is-making-a-comeback>, last accessed March 2023).
198. Green Car Congress. *IDTechEx forecasts second-life EV battery market to reach US\$7B by 2033*, March 2023 (web link: <https://www.greencarcongress.com/2023/03/20230314-idtechex.html>, last accessed March 2023).
199. Green Car Congress. *Electra produces lithium from battery recycling trial*, March 2023 (web link: <https://www.greencarcongress.com/2023/03/20230314-electra.html>, last accessed March 2023).
200. California Air Resources Board, Appendix D: Emissions Inventory Methods and Results for the Proposed Amendments, 2022 (web link: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2022/acii/appd.pdf>, last accessed February 2023).
201. California Air Resources Board. 2023 Carbon Intensity Values for California Average Grid Electricity Used as a Transportation Fuel in California and Electricity Supplied Under the Smart Charging or Smart Electrolysis Provision (web link: https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/2023_elec_update.pdf, last accessed March 2023).

These documents are available for inspection at the California Air Resources Board, 1001 I Street, Sacramento, California, 95814, between the hours of 9:00am to 4:00pm, Monday through Friday (excluding holidays). To inspect these documents please contact Bradley Bechtold, Regulations Coordinator, at (279) 208-7266.

Environmental Analysis

The proposed modifications do not change implementation of the regulation in a way that affects the analysis and conclusions of the Draft Environmental Analysis (EA) included as Appendix D of the Staff Report. Many of the modifications consist primarily of revisions to provide more flexibility in complying with the requirements, as well as definition, and provision clarifications. As discussed in more detail above, modifications provide three more years for some fleet owners to purchase ZEVs, require fleet owners to purchase the cleanest ICE vehicle when a ZEV is unavailable, and require manufacturers to sell 100 percent ZEVs in California starting four years earlier. None of these modifications fundamentally change the compliance responses since most of the infrastructure construction would have already occurred by 2036. Therefore, no recirculation of the Draft EA is required.

Agency Contacts

Inquiries concerning the substance of the proposed regulation may be directed to Paul Arneja, Air Resources Engineer, In-Use Control Measures, at (279) 208-7342 or (designated back-up contact) Craig Duehring, Manager, In-Use Control Measures at (279) 208-7369.

Public Comments

Written comments will only be accepted on the modifications identified in this Notice. Comments may be submitted by postal mail or by electronic submittal no later than the due date to the following:

Postal mail: Clerks' Office, California Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: <https://www.arb.ca.gov/lispub/comm/bclist.php>

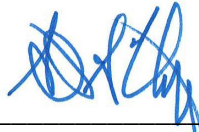
Please note that under the California Public Records Act (Gov. Code § 6250 et seq.), your written and verbal comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

In order to be considered by the Executive Officer, comments must be directed to CARB in one of the two forms described above and received by CARB no later than the deadline date for public comment listed at the beginning of this notice. Only comments relating to the above-described modifications to the text of the regulations shall be considered by the Executive Officer.

If you need this document in an alternate format or another language, please contact the Clerks' Office at (916) 322-5594 or by facsimile at (916) 322-3928 no later than five (5) business days from the release date of this notice. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Si necesita este documento en un formato alterno u otro idioma, por favor llame a la oficina del Secretario del Consejo de Recursos Atmosféricos al (916) 322-5594 o envíe un fax al (916) 322-3928 no menos de cinco (5) días laborales a partir de la fecha del lanzamiento de este aviso. Para el Servicio Telefónico de California para Personas con Problemas Auditivos, ó de teléfonos TDD pueden marcar al 711.

California Air Resources Board



Steven S. Cliff, Ph.D.
Executive Officer

Date: March 23, 2023

Attachments

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see CARB's website (www.arb.ca.gov).